

The New

PENCIL POINTS

JULY • 1942





● White cement floor saves lighting and air-conditioning facilities and thus conserves rubber, metals, and power. Over 300 light measurements (see small picture) show white cement floor had 60% higher reflection factor than gray floor in same plant and increased vertical illumination 20%.

WHITE CEMENT FLOORS INCREASE LIGHT, SPEED WAR PRODUCTION, CONSERVE RUBBER, METALS, POWER

★ Consolidated, North American, Boeing, and Douglas aircraft manufacturers installed light-reflecting white cement floors in 1941... They were so satisfactory that they and others are installing them in additional plants in 1942.

EVERYONE knows good lighting speeds production. Everyone knows light walls and ceilings conserve light by reflection. But until recently, the reflecting

value of floors has been overlooked. Then came big aircraft plants, and with them came the idea of white cement floors to increase general illumination and to reflect light under the huge wings and fuselage.

Extensive Survey Shows Advantages

In Consolidated Aircraft Corporation's Texas plant constructed by The Austin Co., adjacent floors of gray concrete and of white concrete made with Atlas White cement were installed. Over 300 light

measurements were made at various working levels and locations over both types of floor. The results were fivefold:

1. The white cement floor had a 60% higher reflection factor;
2. This high reflection factor increased vertical illumination 20%;
3. To obtain the same illumination over the gray concrete floor would require a comparable increase in lighting facilities, air-conditioning and power. These involve aluminum, copper, rubber, steel, magnesium, lead, zinc, and resins—all priority materials. Hence white cement floors save up to 20% or more of critical rubber, metals, and power.
4. In service the loss in reflection value was less on white floor than on gray floor.
5. An economic study available upon request shows how the white cement floor paid for itself in less than a year.

Light-reflecting floors, made with Atlas White cement, are of value in any building where production, lighting, sanitation, and safety are important. Use the coupon for more information. Universal Atlas Cement Company (United States Steel Corporation Subsidiary), Chrysler Bldg., N. Y. C.

QUICK FACTS ON LIGHT-REFLECTING WHITE CEMENT FLOORS made with non-priority materials

1. **What is Cost?**—White cement floor in aircraft plant paid for itself in less than a year.
2. **How about Maintenance?**—Typical procedure in plant with both gray and white cement floors is daily sweeping, monthly damp mopping, and quarterly scrubbing with rotary brush machine. "Before and After" tests show white floor maintained reflection value better than gray floor.
3. **How about Daylight Plants?**—Illumination studies show white cement floors are desirable for plants with or without windows, and for daylight as well as 24-hour operation.

4. **What Types of Buildings?**—White cement floors are of value not only for increasing production but also wherever sanitation and safety are important—in food plants, hospitals, offices, warehouses, laboratories, and in stair-wells, corridors, and basements.
5. **Can You Retop Old Floors?**—Concrete is commonly used for retopping old floors of concrete or other types.
6. **Are Materials Available?**—Suitable sand, stone and Atlas White cement are non-critical, non-priority materials.

LIGHT-REFLECTING FLOORS

MADE WITH ATLAS WHITE CEMENT



Universal Atlas Cement Company
Chrysler Bldg., New York City

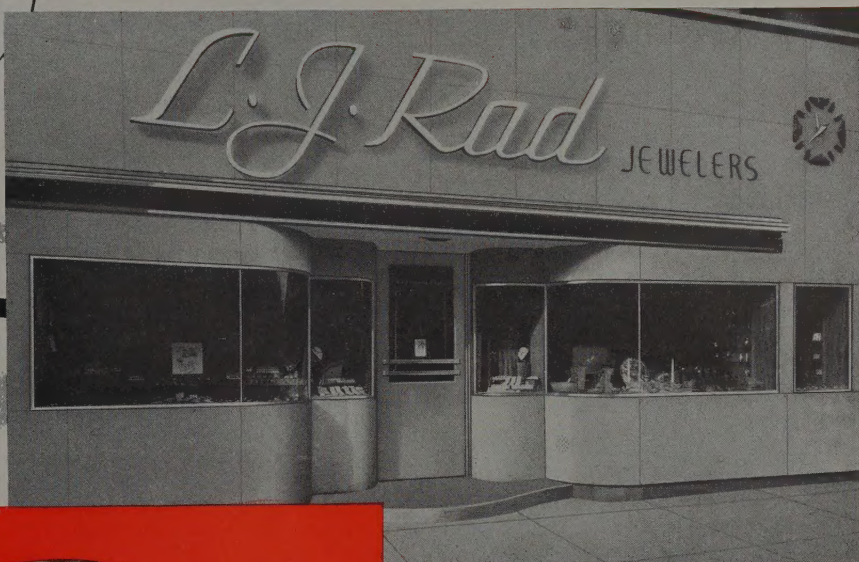
Please send more information on how white cement floors increase illumination, increase production, and save critical materials.

PP-F-1

Name _____
Position _____
Company _____
Address _____
City _____ State _____

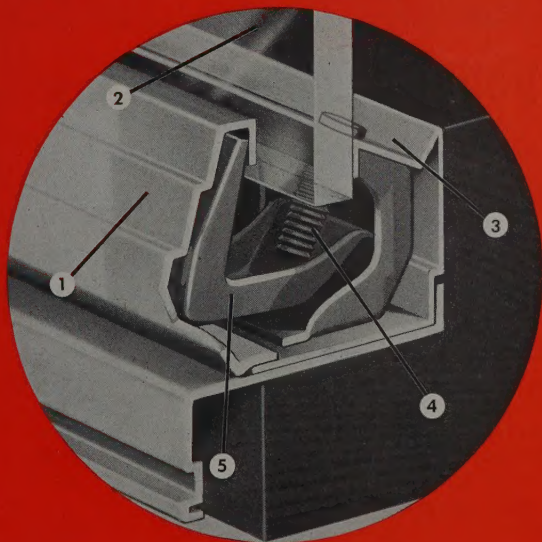


CUSHION GRIP ON SHOW WINDOW GLASS!



— FOR YOUR PROTECTION!

Bitter experience has taught merchants the importance of proper protection against show window glass breakage. That's why it is always wise to use Zouri Construction on every store front job. The famous Zouri Safety Key-Set Sash meets the most rigid requirements for holding show window glass in a firm, secure, CUSHION GRIP. Every part that touches glass will yield under pressure or vibration. So play safe—and check with your local Zouri distributor who has a stock of Zouri construction—or write ZOURI STORE FRONTS, NILES, MICHIGAN.



1. Fully Resilient Cold-Rolled Face Piece. Clean, Sharp Contours.

2. Zouri Sash Accommodate Glass Varying From 3/16" to 5/16".

3. Wide Trough To Drain Moisture From Glass. Cushion Grip.

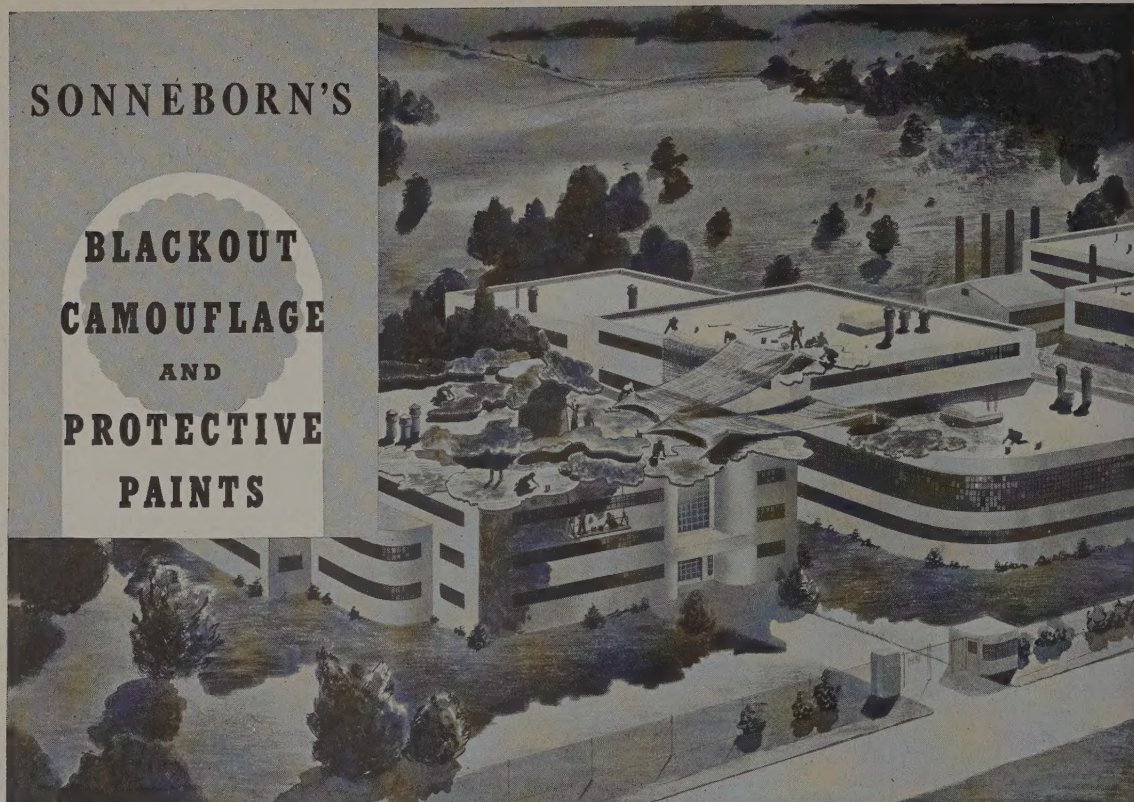
4. Safety Key-Set Screw—Cannot Be Tampered With—Indirect Pressure.

5. Fully Resilient Mechanism Which Draws Face Piece Against Glass.

ZOURI
Store Fronts

SONNEBORN'S

**BLACKOUT
CAMOUFLAGE
AND
PROTECTIVE
PAINTS**



For Protection that's DOUBLY NECESSARY now

Protecting buildings and equipment against the ravages of weather has always been common-sense economy. It is a downright necessity now that facilities of all kinds be kept at their best for the duration. And today's needs call for special provision for security—through blackout and camouflage.

Sonneborn's Blackout and Camouflage paints meet this two-fold need fully—economically. Because they are basically protective coatings, they afford protection against weather and other sources of corrosion. *They meet Government requirements as to opacity and non-reflecting qualities assuring a minimum of light-reflection and are available in colors which reflect only the longer infra-red radiations and absorb most of the incident light.* The range of finishes has been expanded to include types required to complete defense contracts for various Government agencies. Masonry, wood, glass, metal, etc. are among the surfaces to which these are applicable.

Write today for full details on Sonneborn Blackout and Camouflage paints, and get your copy of the New Building Products Catalogue.

Where Results Count—Count on Sonneborn

L. SONNEBORN SONS, Inc.
88 LEXINGTON AVENUE, NEW YORK, N. Y.

SONNEBORN MAINTENANCE HELPS INCLUDE

Caulking Compounds—airproof, non-shrinking, waterproof, elastic; in bulk or for cartridge use.

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Paints—Varnishes—Enamels—protective coatings—for masonry, wood, metal; floor and desk varnishes.

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Waterproofing—above and below grade; colorless treatment for exterior walls.

Waxes—floor waxes, rubless or buffing types; liquid and paste; also colored waxes.

Tile-Text Floors

For
Basement-less
Homes—



Typical Defense Home in W. Heise's Blackhawk Heights development, Westmont, Illinois

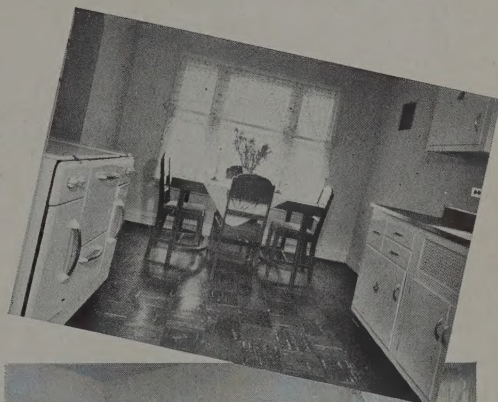
★ ★ ★ “it's ideal for War Housing—
applied directly on concrete slabs”

Says W. HEISE, Chicago Builder

Basement-less defense homes are growing rapidly in favor with progressive builders because they can be constructed faster, require smaller quantities of critical materials, and are more adaptable to modern living conditions.

W. Heise, prominent Chicago Builder, has used Tile-Text throughout the defense homes in his popular development, “Blackhawk Heights,” Westmont, Illinois. Why? Because Tile-Text is low in first cost, attractive, long-wearing, and safe to install directly on concrete sub-floors on, above, or below grade.

Tile-Text floors are installed quickly and efficiently by approved, experienced Tile-Text contractors located in all principal cities and towns. Write today for the name of your nearest Tile-Text contractor and complete data on Tile-Text asphalt tile flooring for defense homes.



Note the attractive Tile-Text floors in the kitchen and bedroom of the home illustrated above

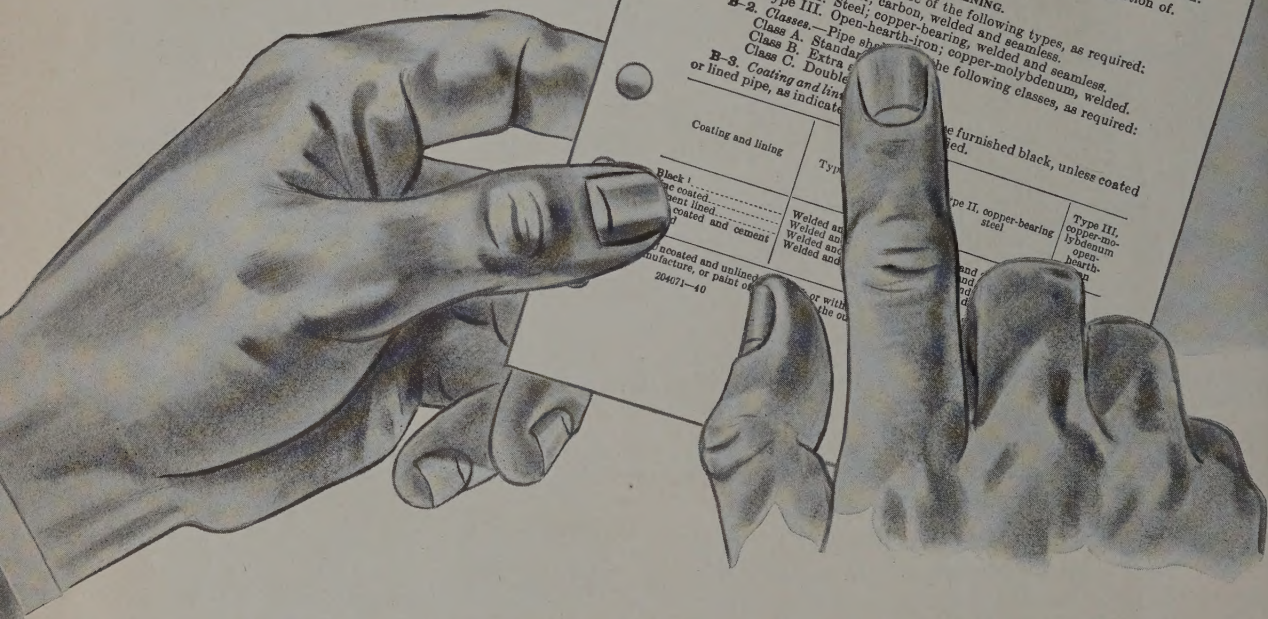
Our constant objective is to furnish the architect with an honest, steadily improved product that will enable him to design architecturally correct floors which can be installed and maintained properly at minimum cost.

THE TILE-TEXT COMPANY
101 PARK AVE., NEW YORK • CHICAGO HEIGHTS, ILL.

THIS IS THE FOURTH OF A SERIES DEALING WITH THE PART OF TILE-TEXT IN THE DEFENSE PROGRAM

Government Specifications

SHOW THE DIFFERENCE!



You can't tell Government engineers that all pipe is alike. They've made it their business to learn the facts about pipe. They *know* the difference between the various types—have selected those approved for Government work. So if you want to be qualified to select the *right* pipe for each and every type of service, *you* should know the facts about pipe, too.

Do you know Toncan Iron Pipe and how it differs from others? Get authentic facts from Republic—producer of all three types approved under Federal Specification WW-P-403a.

Toncan Iron Pipe is made to resist severe rust and corrosion. It is *not* a copper-bearing steel pipe. Toncan Iron is an open-hearth *iron*—highly refined—remarkably free from impurities that aid corrosion. *Molybdenum* is added to refine the grain structure and improve the iron's ability to take more rust-resistant copper *effectively* and *uniformly* all the way through

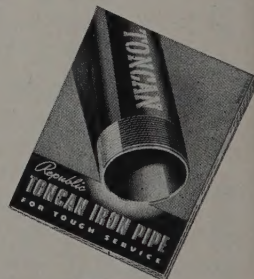
the metal—thus adding to its corrosion-resisting qualities. That's why Toncan Iron, with *twice as much copper* as the best copper-bearing steel, has greater corrosion-resistance than any other ferrous material in its price class.

Specify Toncan Iron Pipe for installations where rust and corrosion attack. It's a sign of quality and economy in the service you give.

Know the relative facts about Toncan Iron Pipe and others to serve your clients better. Write for this book now. Also see Sweet's 27/3. In Sweet's, too, is data on other Republic products: Sheets 13/6—Steel and Tubes 23/5—Berger 9/1 and 21/2—Truscon 15/18.

REPUBLIC STEEL CORPORATION

General Offices: Cleveland, Ohio
Berger Manufacturing Division • Culvert Division
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Union Drawn Steel Division • Truscon Steel Company
Export Dept.: Chrysler Building, New York, N. Y.



REPUBLIC Toncan Iron PIPE

Reg. U. S. Pat. Off.

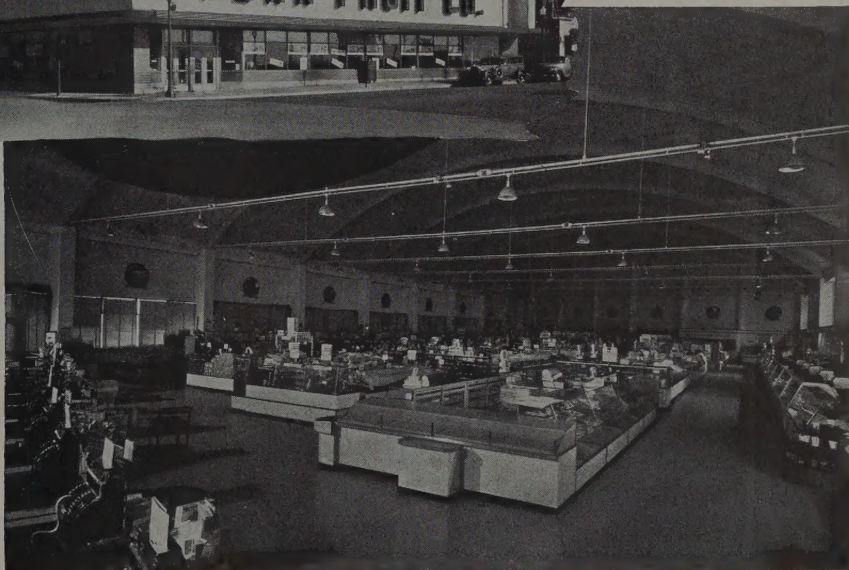
An alloy of refined open-hearth iron, copper and molybdenum—that grows old slowly



America's largest food market is Exide protected



Penn Fruit Company's new market serves 65,000 Philadelphians weekly...and Exide Emergency Batteries guard its electricity.



Here's the actual photograph of the market lighted from the emergency circuits by Exide Batteries.

THE Penn Fruit Company's new food market is altogether up-to-the-minute. Largest in the country, its 38,000 square feet hold two city blocks of counters, 30 cashiers, 200 clerks, and can serve 65,000 customers a week. Naturally, this modern market needs its dependable Exide protection.

Exide
EMERGENCY BATTERIES



Despite all precautions of utility companies, forces beyond control can cause power failure. Storms, floods, fires, and street accidents may shut off power and light... but an Exide Emergency Lighting Unit steps in *instantly* to make good the loss. All architects should know about this protection. Write or wire your nearest Exide Branch for full details, *today*.

THE ELECTRIC STORAGE BATTERY COMPANY, Philadelphia
The World's Largest Manufacturers of Storage Batteries for Every Purpose
Exide Batteries of Canada, Limited, Toronto

IT HITS THE TARGET TWICE!



ALL fluorescent lamps are alike in that each requires the use of mercury—an essential war material.

But lamps differ widely in the way that material is used.

Through the newly patented “mercury bomb,”* Hygrade Lamps now get twice the good out of the same volume of mercury—they stretch this scarce and vital metal 100% further.

But more than that—this remarkable new device lifts Hygrade performance to a new high level.

You see, too much mercury in a fluorescent lamp means more than waste—it means that the excess deposits itself on the surface in the form of dark streaks and splotches that cut down light output. On the other hand, too little mer-

cury may cause the lamp to grow dim after a short period of service.

The “mercury bomb” rigidly controls—to the thousandth of a gram—the amount of mercury used in Hygrade Lamps; assures precisely the right quantity to keep them “bright to the last inch.”

There are four other good reasons—easily verifiable—why Hygrade Sylvania Lamps can best serve war-time lighting needs. They give *more light*; they have a *smoother coating texture*; they’re *uniform in color*; they *last longer*.

These fine lamps work well in any type of fixture. They’re at their best when operating in fixtures made for them—“Miralumes”—complete Hygrade fluorescent units in which each part teams up with the rest.

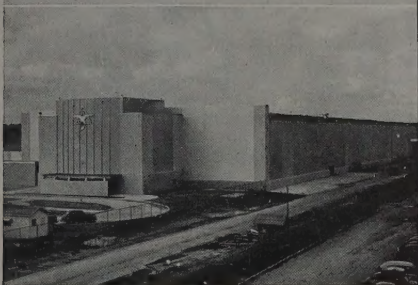
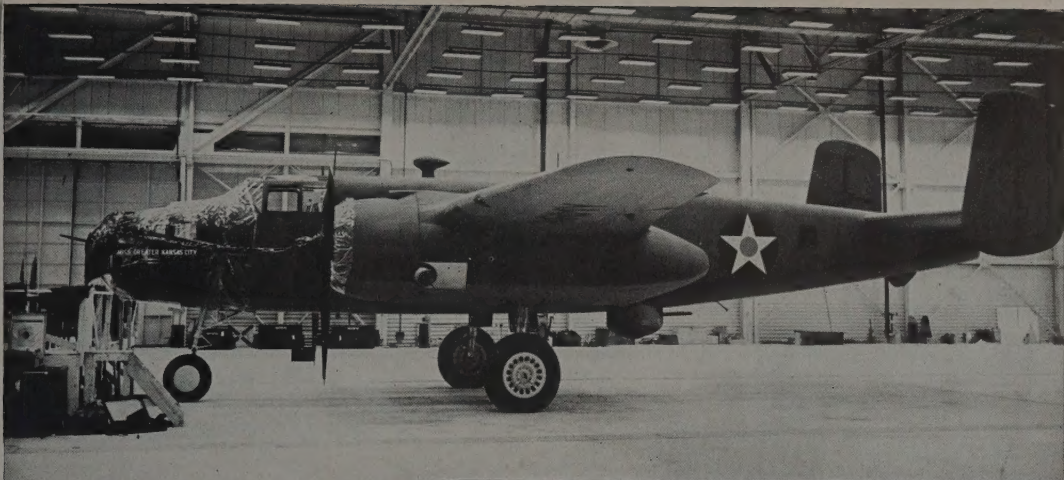
If you haven’t yet received our free file-size kit—containing catalogs, prices and complete technical specifications on all Hygrade Fluorescent Lighting Equipment—write today to Dept. P-7, Hygrade Sylvania Corporation, Salem, Mass.

U. S. Patent No. 2,283,189



HYGRADE SYLVANIA CORPORATION SALEM, MASS.

Makers of Hygrade Incandescent Lamps, Fluorescent Lamps, Fixtures, Starters, Sockets and Sylvania Radio Tubes



*North American Aviation plant.
Medusa Products used in
the Building.*

WINGS

OVER *white* CEMENT FLOORS

The use of "Medusa White," the original white Portland cement, for floors in leading aircraft manufacturing plants is receiving widespread attention throughout the architectural and engineering professions. Enough of these white floors have been laid and used to prove their tremendous advantages in light reflecting, particularly for work under plane wings. Tests show that the "Medusa White" floor has a reflecting factor of 44% as compared to 27.4% for gray cement. Further, the white floor decreases eyestrain and eye-fatigue. This means that in practically every part of the plant with exception of those places where the greasy operations are carried on, the white floor is a tremendous aid in increasing production through its ability to reflect and diffuse light. With the use of "Medusa White" floors, there's a substantial saving in installing lighting fixtures and the consumption of electricity. Even considering higher maintenance costs, the "Medusa White" floor pays for itself in less than a year. A "Medusa White" floor can be laid over old gray concrete floors. Outside of the aircraft field, the white floor has tremendous possibilities in stores, laboratories, factories, hospitals, schools and offices. Now is the time for you to investigate the use of "Medusa White" for floors you have under consideration. Our Engineering Department will be glad to work with you.



MEDUSA PORTLAND CEMENT CO.
1004 MIDLAND BLDG. • CLEVELAND, OHIO

Also made by Medusa Products Co. of Canada, Ltd., Paris, Ontario

Sweeping changes that have overtaken the architectural profession are reflected in the redirected editorial approach, the appearance, and the contents of this magazine. But the attention of the Editors has not wavered from the subject that has claimed their devotion since PENCIL POINTS was founded—the Architectural Profession—and we take this opportunity, in the second issue of a new era in the career of the magazine, to invite the expression of our readers' opinion. The magazine has changed; our readers have changed too! We have a fight on our hands and we want to hear from those for whom the fight is being waged.

GEORGE NASON, *Chief of Design, Operations Division, Camouflage Section, The Engineer Board, Fort Belvoir, Virginia*, offers the following comments on the approach and decisions made in the ALBERT MAYER article on Site Planning, which appeared in the May issue of PENCIL POINTS, beginning on page 245.

I was rather taken back with the introversion of an author who could find so many things wrong with the plans of eight other designers and then present as the shining example of what to do, a plan which he had made and which is probably more filled with serious planning errors than the others.

There are good methods in all of the first eight plates that might well be talked of. A much finer presentation of the science of site planning could have been made by pointing out the constructive thought in each plan, rather

than by building up a series of destructive criticisms. One learns much more by having his attention called to good design than by having his attention focused on bad design.

Plate 1 is a direct, straight-forward solution of a compact problem on a very economical basis and much can be said of it.

Plate 2 shows use of irregular lines that very evidently indicate a tough piece of topography. To present a two-dimensional plan of this without the third dimension justification shown by topography is not cricket.

Plate 3 is a well balanced solution with an intriguing, off-axis approach.

Plate 4, while economically avoiding a one-sided road along a park area, has very uniquely, by walks, made this public park area conveniently available to everyone in the project.

Plate 5 is an attractive solution of front walk entrances with functional service roads at the backs of the houses. Again the third dimension of topography is needed to explain the scheme.

Plate 6 is an economical solution with a minimum use of roads for the number of houses served.

Plate 7 is a fine example of a flowing design, yet it discourages through traffic from one main highway to another. It has a very interesting connected park system throughout and is an example of the individual lot type of site planning that can be salvaged into individual lot ownerships—an interesting thought in this period of growing landlordism. Note that the intersections were designed as T's to discourage through-traffic and to provide minimum traffic intersection hazard.

Plate 8 shows a very high density use with a minimum of roads and may well have been justified.

NEWS TO YOU

The world is now changing with such breath-taking speed that even daily newspapers are hard-pressed to keep pace. Only the most alert can hope to comprehend Today's events: the placid man finds himself looking only at the historic spot where the DECISION HAS ALREADY BEEN MADE. Random pages in a monthly magazine suddenly are inadequate to keep Architects in touch with events directly affecting their future! With this issue, the Editors send you the first copy of a NEWS SUPPLEMENT that will serve to collect professional news-facts and announcements. Events that are remolding the world will not leave the architectural profession untouched. Its members must read and understand the decisions of our time

Plate 9, designed by Mr. Mayer, is based on that major fallacy of the trick *cul-de-sac* which has been tried and abandoned and tried again over and over for the last thousand years. Each decade it is being introduced by some chicane designer as a new and original thought.

Admittedly, the *cul-de-sac* produces privacy, but it produces that privacy at the high sacrifice of circulation. A skilled site designer can easily keep major traffic out of a residential area by the ingenious design of the circulating streets rather than taking the easy path to glory by using the dangerous *cul-de-sac*. It is a short cut that shows a laziness of mind in design. Under certain topographical conditions the *cul-de-sac* is an only solution, but its use should be seldom, rather than wholesale.

Recent events have taught us the danger of the incendiary bomb. A stick of incendiary bombs dropped over this housing group would start fires in several dozen areas. The fires at the entrance of the *cul-de-sac* would stop any possibility of fighting those at the far end. A serious and unnecessary

HENRY BELL, of the office of Jack B. Smith, Birmingham, Alabama Architect, drew these pencil sketches representative of the town and country life of Birmingham's negroes. Left to right: "Shoeshine Emporium, 5th Ave., Birmingham"; "Comfort Station Near Athletic Club, Birmingham"





...consult Raymond

During these times of war effort, your construction projects demand a choice of materials and methods which are both promptly available and truly adequate. Raymond's world-wide experience in every type and size of concrete pile foundation work, through more than four decades, and under a great variety of conditions, will assist you to determine those materials most quickly obtainable and which will be completely satisfactory. Fortunately, the ingredients of concrete are available in unlimited quantities, reducing the use of priority or allocation materials to a minimum. War essential steel, too, has been conserved in the design, yet today's plans and specifications meet every engineering requirement for maximum strength.

THE SCOPE OF RAYMOND'S ACTIVITIES

includes every recognized type of pile foundation - concrete, composite, precast, steel, pipe and wood. Also caissons, construction involving shore protection, ship building facilities, harbor and river improvements and borings for soil investigation.

RAYMOND

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To break the shipping bottleneck...
750 new merchant ships in 1942...
1,500 new merchant ships in 1943...

That is America's promise to the Victory Program—and America is going to beat that promise.

It calls for huge new shipbuilding facilities . . . thousands of plants to turn out ship parts and equipment—steel plates, ship fittings, propelling machinery.

Low cost, controlled heat is essential to all-out production. Light, compact equipment is vital for shipboard heating.

Steam is universal for heating at sea because it requires less space and weight than any other heating medium. Steam, harnessed and brought under control with Webster Equipment, is fast, sure, safe and economical.

In this war emergency, Ordnance production has first call on our facilities. But, we are still producing Webster Steam Heating Equipment for use wherever it will help the war effort.

Essential repairs for Webster Systems are available on A-10 priority, under W.P.B. Emergency Repair Order P-84. Orders should be limited to actual needs.

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Webster
Steam Heating

loss of life and property—when housing was sorely needed—might well result. This lack of circulation occurs only in this one plate. It is a most unfortunate example at this time to set up as the ultimate in site design. The events of the last two years have again outmoded the *cul-de-sac*, and our new danger from the air will be ever continuing and ever increasing throughout the future.

(These are problems which the architect must face and not quibble about or run away from. Mayer in his article states, "Perhaps this strong statement of defects, remedies, recommendations, principles, sounds too dogmatic and pontifical. Having thought a good deal about these problems and observed and studied my own work and a large number of other projects, these are the conclusions I've come to. Every architect entrusted with the design of a community should face every one of the problems here raised. If we don't do a grand job . . . we're not likely to get another! We're likely to be frowned out by the government bureaus and the architectural specialists who . . . can at least always be counted on to do a competent job."—The Editors)

In discussing the work of Alden B. Dow in the May issue of PENCIL POINTS, Talbot Hamlin spoke of the rhythms of concrete blocks laid in a continuous pattern. The Editors present here a criticism by Walter Dabney Blair, F.A.I.A., New York ("the pleasing associated values of rhythm cannot rightly be attributed to repetitive uniformity"), and Mr. Hamlin's reply to Mr. Blair.

"Rhythm is made by the patterned intervals between the repeated elements or units of a design. It may be expressed thus: unit + interval + unit. The interval may be simple or compound in its structure and it must appear at equal spacing in time for music, or in space for architecture or design.

"Repetition is the repeat of the unit without a spatial patterned interval between the units. It may be expressed thus: unit + unit + unit. As rhythmic is a pleasing word, it is often erroneously used for repetitious. A repeat is not a rhythm.

WALTER DABNEY BLAIR, F.A.I.A.

Mr. Blair's letter brings up one of the most important and also one of the most difficult to define of all the factors of architectural esthetics. My own definition would perhaps be broader than Mr. Blair's. It would include any repetition of elements which recognizably form some kind of a sequence. Grains of flour in a measure of flour do not have rhythm, of course, but objects which are recognizably of the

same series may, I believe, be juxtaposed without destroying their rhythmical content—just as in music there are rhythms that are legato as well as those that are staccato, and the very essence of the legato concept is the close connection of the elements which make up the pattern.

Even from the point of view of Mr. Blair's own definition, however, it seems to me difficult to deny rhythmical quality to Mr. Dow's block construction. It is made apparent to us by the channels and the joints between the blocks even more than by changes in the color or texture of the blocks themselves. Seen in this way, according to Mr. Blair's definition, such a block wall has a definite and striking rhythm caused by the repeated dark lines of the joints, separated by the intervals (which are the blocks themselves).

I stressed the rhythmical quality in Mr. Dow's work because I feel strongly that many of our designers lack either an appreciation of the value of rhythmical patterning in building, or else an ability to carry it out. So many structures of today are rhythmically formless and loose.

In addition, I feel that Mr. Blair may be unduly limiting the scope of architectural rhythm when he demands equality of spacing for rhythmical units. There are in good buildings, as in good prose, all sorts of possible varieties of rhythmical expression. Some are based on regular dimension repetitions, but others (like classic Chinese architecture) owe much of their effort to modulated changes in the dimensions of rhythmical units. And when we come to the matter of the rhythm of curves and the rhythmical balance of linear direction we come into fields where an almost unlimited variety of form is possible, provided that some basic rhythmical sensitivity is present in its designer. TALBOT HAMLIN

PERSONALS

George Howe Foxworth, Architect, Burlington, N. C., has closed his office for the duration of the war, and is now with the United States Engineer Office, MacDill Field, Florida.

Vernon F. Sears, Architect, has been added to the technical staff of the United States Plywood Corp. as staff architect. Mr. Sears will study the application of plywood in both prefabricated and field operation for housing and other types of frame construction.

William Wilson, Architect, who is also Commissioner of the Department of Housing and Buildings of the City of New York, was recently appointed to the New York City Housing Authority.

JUNK

-you've got what it takes

*T*HAT old junk -- useless to you -- may provide the extra implements of war to insure Victory -- your old iron and steel, copper, brass, rubber, even burlap, paper and grease.

Take steel, for example. Every hundred pounds of scrap you turn in will help produce one more powerful demolition bomb to speed the destruction of those plants that enable the Nazis and Japs to prolong the war.

To make the steel for a large tank, 10 to 15 tons of scrap are needed. And one badly needed "sub-chaser" takes many carloads of scrap.

The steel industry is using all its resources to produce more steel, but it needs your help and needs it now, -- that's why the junk you can turn in is so vital to America's war effort.

THE YOUNGSTOWN SHEET & TUBE COMPANY
Youngstown, Ohio



THAT \$500 BOND

Have you sent in your suggestion for a name for this magazine as it is now being published? The Publisher offers a \$500 United States War Bond as the prize to be awarded on the basis of (1) the appropriateness of the name itself and (2) the soundness of the reason advanced for its selection by the contestant. Above all, the name should be clearly associated with the field we serve—Architecture. Conditions of the contest were published last month on page 12. The deadline is August 20. Send your suggestions to this office Now.

ROSENBERG AWARD

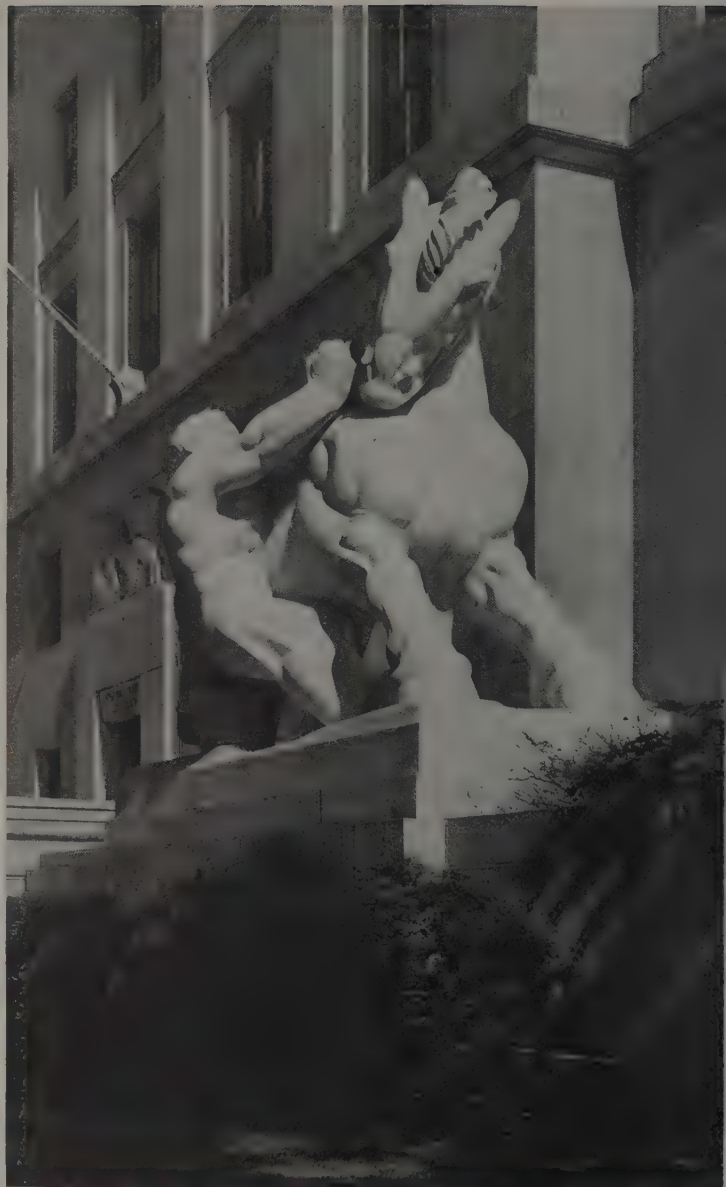
Ray Bertrand, lithographer, and William L. Clarke, designer and craftsman, have been jointly awarded the third Abraham Rosenberg Scholarship by the San Francisco Art Association. This marked the first time the award had been given in the line of crafts; previously it had been given in painting or sculpture.

AMERICAN ACADEMY ARCHITECTURE PRIZES

Andrew E. Kuby, Jr., who was graduated last month from the University of Illinois with the degree of B.A. in Architecture, won first prize in the American Academy in Rome competition in Architecture. Nine final competitors had been chosen through a preliminary competition from 47 entrants. The final problem, which covered a five week period, was "A Supply and Maintenance Depot for United States Army Air Corps." It was written by Robert A. Willgoos, Associate Architect to the U. S. Engineer Board, Camouflage Section.

Mentions were given to Allen R. Kramer, Cornell University; Edward L. Burch and Hollis L. Logue, Jr., University of Illinois. The money allotted to second, third, and fourth prizes will be shared equally by these three contestants.

Members of the Jury of Award were Eric Gugler, chairman, Cameron Clark, J. André Fouilhoux, William Gehron, and Alfred E. Poor; with technical advisers, Lt. Col. Homer Saint-Gaudens, Captain Charles M. Achley and Captain M. E. De Longe, from the U. S. War Department, Camouflage Section, and John Walter Wood, author of "Airports."



Two stone sculpture groups on either side of the terrace in front of the Federal Trade Commission Building, Washington, D. C., have been completed by Michael Lantz, sculptor, who was awarded the commission in 1938 to model the two massive stone groups. He was one of the 247 American sculptors who participated in a national competition for the design. Each huge sculpture consists of a titanic work horse being held under control by a powerfully-built man

COMPETITION ANNOUNCEMENTS CONTINUED ON PAGE 14

Leave off the Penthouses!

for more modern structures at lower cost

*Installations Now
"Under Way"*

86 ELEVATORS

Badger Ordnance Works,
Wisconsin

23 ELEVATORS

Army Aircraft Assembly Plants in
Texas and Oklahoma.

19 ELEVATORS

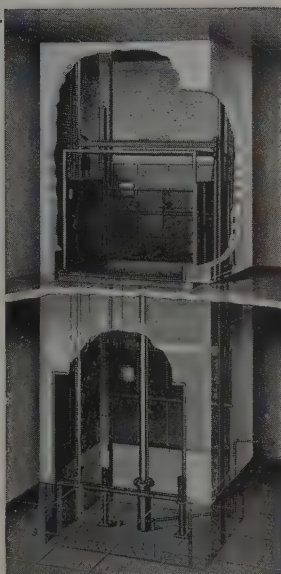
Midwest Air Depot, Oklahoma

19 ELEVATORS

Air Corps Depot, New York

13 ELEVATORS

Brookley Field, Ala.



Streamlined Buildings Made Possible By Specifying Oilraulic Elevators

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CITY..... STATE.....

Rotary
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OILDRAULIC ELEVATORS

(Continued from page 12)

LANGLEY SCHOLARSHIPS

Three Edward Langley scholarship awards to architects, for advanced study in wartime aspects of architecture, were announced at the recently-concluded A.I.A. convention. The recipients are *Charles B. Guenther*, who will complete work in regional planning at the Illinois Institute of Technology; *Arnold W. Tucker*, who is to study prefabricated housing constructed and under construction, and report on various phases of it; and *Arthur Riehl*, who is to study wartime housing and civilian protection.

BATTERY PARK COMPETITION

The Fine Arts Federation of New York has announced a competition for the selection of an alternative design for the development of Battery Park, New York. Participation is limited to registered architects and landscape architects residing or having their offices within the city limits of greater New York, whose applications to compete have been made by mail to the professional advisors, *John A. Thompson* and *Egerton Swartwout*, 139 E. 53rd St., New York, on or before July 11, at which time the programs

will be issued. The competition will close on August 11.

The first prize award will be \$500; second prize, \$100; three honorable mentions of \$50 each.

WILLIAMS SUCCEEDS STEVENSON

Edgar I. Williams was recently elected president of the New York Chapter, A.I.A. to succeed *Harvey Stevenson*. Other officers chosen were *L. Andrew Reinhard*, vice president; *Robert S. Hutchins*, reelected secretary; *Hugh Ferriss*, recorder; *George A. Licht*, treasurer. New members of the executive committee are *Dean Leopold Arnaud* and *Harold R. Sleeper*, in addition to the new officers.

WPB CONSTRUCTION BUREAU IN NEW YORK

The Bureau of Construction, recently established to coordinate all construction functions of the War Production Board, has moved its headquarters to the Empire State Building, New York. *William V. Kahler*, Chief of the Bureau, is now stationed there.

The Bureau is divided into five operating branches. The *Project Analysis Branch* handles all applications for private construction, recommends priority ratings for them, and administers limitation and conservation orders covering construction.

The *Materials Control Branch* reviews the use of materials in projects which have been designated as essential by the Projects Analysis Branch. It scrutinizes all designs for construction and orders, wherever possible, the elimination, substitution, and reduction of materials which can be put to use in the production of war material.

The *Project Service Branch* works closely with industry and with the Army, Navy, Defense Plant Corporation, and other government agencies, rendering whatever service is needed to eliminate construction delays so that scheduled completion dates are met. Its function is to advise and assist these groups on design and construction matters, including the procurement and expediting of needed materials.

The *Housing Branch* recommends priority ratings for publicly- and privately-financed war housing. It works with other housing and related agencies in the government, reviewing with them such matters as the type of housing as it relates to the use of materials, availability of utilities, services, etc.

The *Consultation Branch* acts as liaison between the public and the Bureau, interprets the needs and problems of the construction industry, and recommends procedures consistent with the over-all war program.

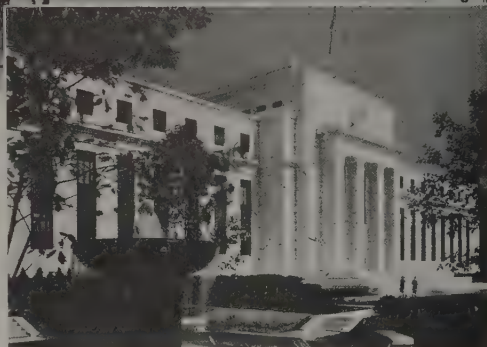
STOPS DRAFTS AND LEAKS—CUTS FUEL BILLS

PUBLIC BUILDINGS NEED PECORA WEATHER PROTECTION



Upper illustration is the District of Columbia Police Court, Washington, D. C. Calked with Pecora by Chamberlin Metal Weather Strip Co. of Washington, D. C.

Lower illustration is the Federal Reserve Board Building in Washington, D. C., one of an impressive list of recent Federal buildings throughout the country calked with Pecora.



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tures is maintained. Air conditioning is brought under more positive control. For 34 years, Pecora Calking Compound has demonstrated its dependability in the calking of all types of buildings. Definitely, it will not crack, chip or dry out when properly applied.

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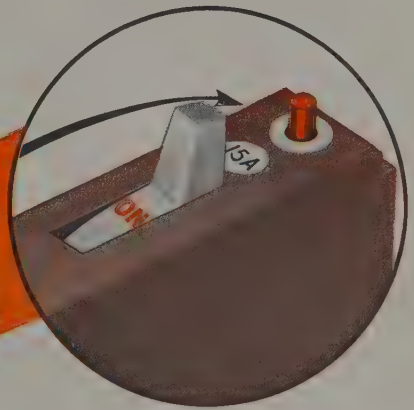
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Type AC Circuit Breaker PANELBOARDS



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Assembled from standardized units, with 4 to 42 branches.

Capacities: 15 to 50 amps., 120 volts AC only, single pole.

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Assembled from standardized units, with 4 to 42 branches.

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At right: ⑦ Dublbrak Circuit Breaker Panelboard and Cabinet (Cat. No. NAB24-3L100), with main lugs only.

In both Types

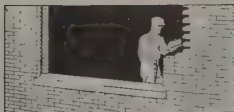
of ⑦ Circuit Breaker Panelboards, annoying interruptions of service from momentary overload are prevented by proper time lag characteristics. Protection against short circuit or harmful, sustained overload is assured — the current is broken automatically before it can build up to a dangerous volume... Installation is facilitated by new and improved terminal connectors — wide gutters — and ample knockouts in steel boxes... The fronts are bonderited to prevent rusting, then attractively finished in pearl gray lacquer.

Write for Informative Bulletins

Bulletins 57 (Dublbrak) and 62 (AC) contain complete descriptions, dimensions and prices, with wiring diagrams and suggested specifications... Frank Adam Electric Company, St. Louis, Mo.



HOW TO INSTALL INSULUX IN OLD BUILDINGS

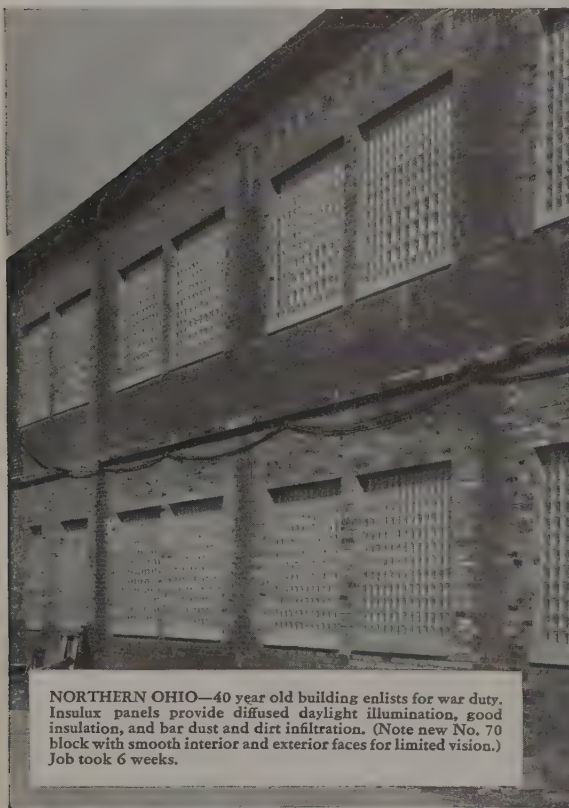


Build a chase in existing walls or with wood blocking.

Any competent mason can install INSULUX panels. The corrugated bearing edges on INSULUX bite into mortar, give block a firmer grip.

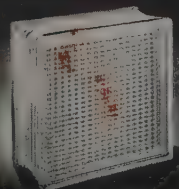


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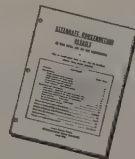
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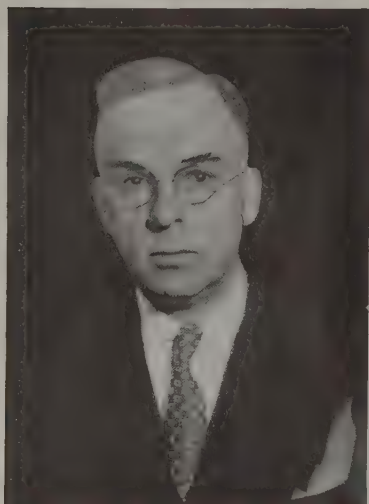
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February 20, 1942

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 Clinton, Iowa

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We would like to take this opportunity to thank your Company and particularly its representatives in the field for the cooperation they have given us.

Yours very truly,
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By *Ch. Nelson*

CGW/w



Another view of the
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Boise, Idaho	Arlington, Va.
Yakima, Wash.	Wichita, Kans.
Atlanta, Ga.	Burlington, Iowa
Canfield, Ohio	

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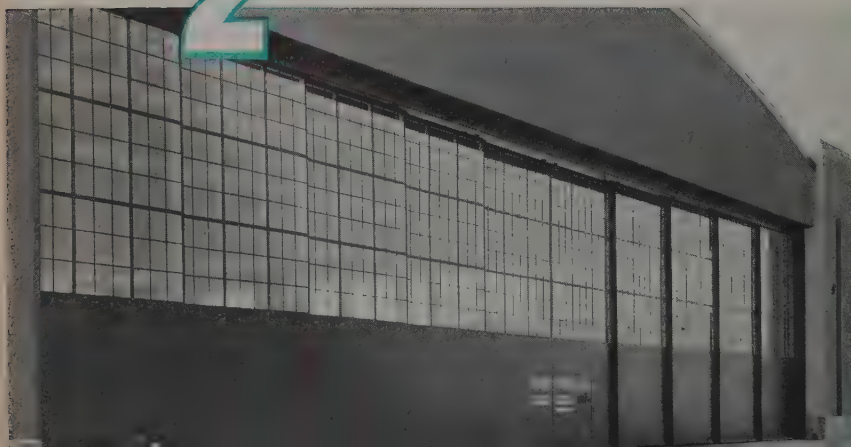
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2



The New PENCIL POINTS

JULY • 1942

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- 23 BIRD OF FREEDOM — patriotic as a July Fourth parade is this study by a master lithographer Stow Wengenroth
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- 27 ELM HAVEN — war workers are living in this low-rent housing project, cited as one of the best Douglas Orr and
R. W. Foote, Architects
- 35 ACQUACKANONK — located in Clifton, N. J., was designed as a war workers community of 350 families Henry S. Churchill
Architect
- 43 TARRANT COUNTY HEALTH CENTER — one type of building valued in towns is the up-to-date clinic Preston M. Geren
Architect
- 44 EYE CLINIC — for Dr. Watson W. Gailey, of Bloomington, Illinois, has some special features Schaeffer & Hooton
Architects
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NEXT MONTH

Vast workshop for pioneers of science is the new Bell Telephone Laboratory, at Murray Hill, New Jersey, designed by Voorhees, Walker, Foley & Smith, New York Architects, and chosen for feature presentation in our August issue. Significant for the merit of its architectural design — which has freshness and directness — this group of buildings also symbolizes increased accent on research as the basis for industrial development. The absolute, functional requirements of a large research laboratory with the necessarily-elaborate piping and wiring services governed the basic design. The reduction of complexity to order was the key to the whole design — a notable and up-to-the-minute addition to American research facilities that will have interest for Engineers as well as Architects. ● A timely forecast in an equally important field of the Architect's responsibility is Antonin Raymond's penetrating analysis of "True Modernism" in residential design, also featured next month. ● Modern as the medium chosen are Helen Treadwell's "Murals on Metal" to be presented pictorially.



Published monthly by REINHOLD PUBLISHING CORPORATION, East Stroudsburg, Pa., U.S.A. Ralph Reinhold, President and Treasurer; H. Burton Lowe, Vice President and Secretary; Philip H. Hubbard, Vice President; Francis M. Turner, Vice President. Executive and Editorial Offices: 330 West 42nd Street, New York. 50 cents a copy. Yearly subscription \$3.00, two years subscription \$5.00 payable in advance, to the U. S. A. and U. S. Possessions, Canada, Cuba, Mexico, Central and South America. Subscriptions to all other countries \$5.00 a year. Remittances by International or American Express Money Order or by Draft on a bank in the U. S. should be payable in United States funds. Subscribers are requested to state profession or occupation. Changes of address must reach us before the 20th of the month to assure delivery of forthcoming issue. Be sure to give both your old and new addresses. To Contributors: Articles, drawings, photographs, etc., sent with a view to publication will be carefully considered, but the publisher will not be responsible for loss or damage. Copyright, 1942, by Reinhold Publishing Corporation. Trade Mark Registered. All rights are reserved. Entered as second class matter, July 8, 1941, at the Post Office, East Stroudsburg, Pa., under the Act of March 3, 1879. Volume XXIII, No. 7, July, 1942. Indexed in Art Index.

rchitects are mericans, too

AMERICANS ALL seek to serve their country in time of total war. That includes Architects. Why is there such blind misunderstanding, such stupid opposition to the idea? Why do some Army and Navy officers, dollar-a-year bureaucrats, business men exalted to the position of "prime contractors," persist in adhering to the sophomoric fable that Engineers are somehow efficient while Architects are impractical, esthetic dreamers, incapable of dealing effectively with the hard-boiled needs of the material moment?

Ridiculous, you say. Of course, it's ridiculous! Yet everyone who has wrestled with the problem of fitting the Architectural Man into the expanding requirements of our current economic conversion has run up against just such stubborn antagonism. Men have told us, over and over, of experiences leading only to frustration—men who know that they have the background, the skills, the flexibility to become adapted quickly and efficiently to jobs requiring knowledge of materials and men, articulation and coordination. Just because the private practice of architecture has become limited temporarily to designing buildings for military or industrial purposes—or for cheaply housing the appended workers—is no valid reason for ignoring the vast talent of a profession hotly eager to contribute its share. Especially absurd is this situation in the face of the fact that many Architects, who have somehow smashed through the screen of opposition, have demonstrated and continue to demonstrate that members of our profession are by training and experience the most orderly of thinkers, the most practical of doers.

Whether the lack of recognition of the Architect's unique capacities for versatile performance stems from unacknowledged professional jealousy, or pure cussedness, or the half-retained impressions of the usual layman's college course in "Appreciation of Architecture" given by some long-haired dilettante still living in the delicately-polite atmosphere of estheticism, is immaterial! It needs to be fought down just the same. If accredited leaders of the profession either won't or can't speak out—for fear of affecting their private gains—the rank-and-file, down-to-earth, workaday practitioner has to drive home the truth on every front.

There is no practicality superior to that of the properly trained Architect. Let us have done with this denial of his right to participate effectively now in his country's battle for world freedom. Let us insist that his potential contribution to the planning of tomorrow's peaceful world be applied before it is too late. Let us use the capacities of America's Architects.

Kenneth Rice



BIRD OF FREEDOM

BY STOW WENGENROTH

The preliminary drawing from which the lithograph was made was drawn in dry-brush on a fairly rough illustration board. A good grade of black water color was used. The size of this drawing was about 25" x 19". The lithograph, drawn on stone, was considerably smaller and was done entirely with Korn's lithograph crayons, No.'s 1 and 2. Because of the difficulty of making any considerable changes or corrections in the stone, I always make a very complete preliminary drawing.

Stow Wengenroth

Breaking the Bureau Barriers

THIS month has seen the continuance of calls and conferences with various Army, Navy, and Governmental agencies. A steady follow-up for re-check has been necessary—where names and qualifications have been previously submitted. Many agencies will soon draw upon these prospects.

Every day for the past month, architects, and draftsmen seeking commissions or civilian appointments have made personal calls at this office. Each man had a particular problem. Many applications on file now will soon be absorbed. As an indication of an applicant's reaction to making a very complete and thorough round in Washington, I call attention to the following letter from Architect Charles S. Symonds, of Miami, Florida. W.A.V.

To Willis A. Vogel, Technical Personnel Adviser
PENCIL POINTS
1727 "K" Street, N.W., Washington, D. C.

Dear Sir:

Permit me to extend my kind appreciation for the manner in which you received me. After our conferences and your information as to where to go and whom to contact, I recite a few of my experiences. I doubt the ability of any office to render more direct and personal advice to would-be applicants than you do here in the capital.

First of all, as you informed me, it is imperative that the job seeker have Civil Service rating. As an Architect, I was presented with several applications for unassembled examinations (i.e., the unwritten type, where you are rated on the basis of your formal application alone). All applications for positions that pay out of government funds must first clear Civil Service.

There seems a hesitation on the part of many men to approach Civil Service in the fear that they will commit themselves in writing and thereby be bound by their signatures to accept the first offer that comes their way. There is nothing committal or binding about Civil Service applications or rating. They serve to facilitate the filing of qualifications and are used to check direct applications for work in specific agencies.

It is possible to get data on any position by consulting your local Civil Service District offices, by requesting application forms for currently advertised positions posted on Post Office bulletin boards or by writing to the Civil Service Commission, Washington, D. C.

Again I concur with you, Mr. Vogel, that a good bit of advice is *not to come to Washington* unless you have a pretty good idea of what branch of the government can best utilize your services. Careful study of circulars and other printed information, that can be had for the asking, will give much assistance and aid. It is easier to make an appointment with an official if preceded by some written communication, whether an inquiry or definite application for work. If a personal interview can then be had (after due assurance such is worth while), then one can successfully present, in addition to his training and experience, the all-important element—personality.

Commissions in Army and Navy

If the architect is seeking commission in either Army or Navy, there are many possibilities open for the trained man. Commissions are not as readily obtained as during "early stages" of war recruitment. Also remember in many instances stress must be laid on the engineering

ability, rather than any artistic qualifications. Army and Navy are interested in administrative and co-ordinating ability and in planning and organization consciousness.

Civil Engineers Corps of Navy

The Civil Engineer Corps of the Navy, lamentably, does not consider a man as being qualified for admission unless he has a degree in engineering or the necessary substitution in practical experience backed by certain preliminary education. Architects, however, are found in Camouflage, Ordnance, Bureau of Yards & Docks, Navigation, and as photographic interpreters, map analysts, and map makers.

Civilians have been taken into the Design Department of Bureau of Yards & Docks, some of the best designers of repute and some Rome Prize winners, and honor graduates from the finest schools of architecture. Their work is the pride of the Navy. Salaries here, unfortunately, are not in tune with the created work, as they start at \$2600 per annum. The experience gained in this work is, however, very valuable. The Bureau has an extensive program and affords many places.

Army Corps of Engineers

The Army is more liberal in its acquisition of men as well as its disposition of jobs. An architect with necessary training is qualified to enter the Corps of Engineers with a commission. The Quartermasters' Corps, the Procurement Division, and the Camouflage Department have taken men with architectural experience.

Some architects have been employed by the Army Engineers at \$3200 to \$4600, and a few by the Navy.

For information contact the Army or Navy engineers in your regional district. Civil Service rating is best obtained first before formal application to your District.

Army and Navy Intelligence

Men of architectural training are potentially splendid applicants for both the Army and Navy Intelligence Services. A man's qualifications in this service must, by the nature of his duties, be necessarily above the average and likewise be subjected to an intense and thorough investigation before acceptance. Proper contact can be made with the Military Intelligence Service of the War Department and the Naval Intelligence Department of the Navy Department, Washington.

Field of Aeronautics

Work is available to architects in the field of aeronautics. This work, like that of shipbuilding is, of course,

highly specialized, but men with architectural training, who know the rudiments of mechanics and structure, who know instinctively and by experience how to make things hold together, who know the qualities and composition of materials, who know how to use the instruments of drafting to tell the story graphically, and who have the spunk to readjust themselves, can find not only a fascinating and creative field in aeronautical designing, but an extremely lucrative and permanent one as well. Contact for this type of work should be made to Commander Old of the Bureau of Navigation, Navy Department, Washington, D. C., to Lieut. Colonel W. F. Lorence, Chief of the Civilian Personnel Branch, Corps of Engineers, War Department, Washington, D. C., and to the various aircraft plants throughout the country.

Maritime Commission

Architects, qualified in the field of reinforced concrete, are being sought after by the Maritime Commission in the stupendous program of shipbuilding in which they are now engaged and will be for many years to come. This program is well worth looking into, for its possibilities are more than meet the eye. I have learned from various sources that it is based on a long range set-up, twenty years or thereabouts, and that it is a splendid opportunity for career-minded men who are not afraid of pulling off their shirts and starting at the bottom. I know of architectural men who are actually working in the hulls of ships as fitters, riveters and welders, but who, because of their background are being shoved ahead with amazing rapidity. Others are being schooled in the departments of ship design and are making headway.

The best and most direct method of contact with this type of work is through the individual shipyards themselves. They are concerned with the employment of men as any industrial plant would be. The Maritime Commission, and in some cases the Navy Department, have supervision of the work performed, but as administrative agencies they handle the broader aspects of policy, organizational management and production, and material and financial procurement. Pay, in this type of work, is excellent, the largest being in the building end.

The Panama Canal

The Panama Canal, Office of the Chief, Washington, D. C., is only too free to admit that it is looking for all types of skilled labor, engineers and architects in the present long range program of construction that is taking place there. Salaries for architects range from \$395.83

per month, plus time and half for overtime, plus fifty-four days leave of absence per annum with pay, plus seven days travel time if leave is spent outside the tropics. Maximum age limit for appointment in the Panama Canal service on the Isthmus is fifty-five years. Appointees to the service pay around fifty to sixty dollars a month for room and board and must go to the Isthmus *alone* until existing military restrictions are modified. The construction program is to last from five to six years.

In communicating with either the Army or the Navy, it is well to bear in mind that both services look upon concise, direct, and tabulated forms of correspondence with more favor than they do on the laborious and lengthy type. Refer, as a heading, to the position for which you are applying. Then list (A) your background, (B) your education, (C) your experience, and (D) your personal qualifications for handling the job for which you are applying.

It seems to be the definite opinion of many agency heads here in Washington, that the Post War planning program will open up for architects many fields of endeavor. What direction this program will take is a matter for each individual to decide. No one seems able or willing to state or define it at the present time.

The National Resources Planning Board has had its budget amputated, although it is valiantly attempting to appeal its case for restoration of funds after the recent Congressional slicing. This Board is composed of some remarkably able professional men. The work it has been doing has been advisory and research to date, but it has only scratched the surface of what it is apparently capable of doing. Of all the organized agencies of the government, I think, that so far as Post War Planning is concerned, this one holds forth more possibilities for the architect than any other. It is doing research study in Urbanism under the direction of Mr. Asher. Mr. Robert Mitchell, an architect, heads a division experimenting in city planning research. Mr. Harold Merrill, administrative officer, and Mr. Frank Herring are among the able officials interested in the subject of Architecture and Planning in the Post War Planning program. Since the work of the Board is so comprehensive, touching as it does upon all phases of sociology, economics, science, organizational and physical planning, it is almost impossible to advise any individual architect as to which division of the Board he could best serve. Application should mention specific qualifications.

June 17, 1942

CHARLES S. SYMONDS

GOOD sources estimate that about 50,000 new employees of many classes will clear in this fiscal year through U. S. Civil Service—also that through the Army Specialist Corps roster, and the new draft questionnaires, the Roster of Scientific and Specialized Personnel, many men will be placed to take good advantage of their skills. The Man Power Commission will also be a factor in assigning labor and skills of all kinds.

There are opportunities for architects to work at many jobs that are a complete change from their natural peace-time habits. The list is so varied that any actual tabulation is impossible, but many will better themselves by doing actual manual labor in skilled crafts. This statement is made after studying the many men personally calling here and study of the cards—as each one is adaptable according to his varied training and background and personality. With encouragement to the architects who so sincerely listed with PENCIL POINTS and who are ably qualified, when finally located, I have sincerely given my best efforts to place our profession to the front for the benefit of all. Time will prove that this program was of real value.

June 17, 1942

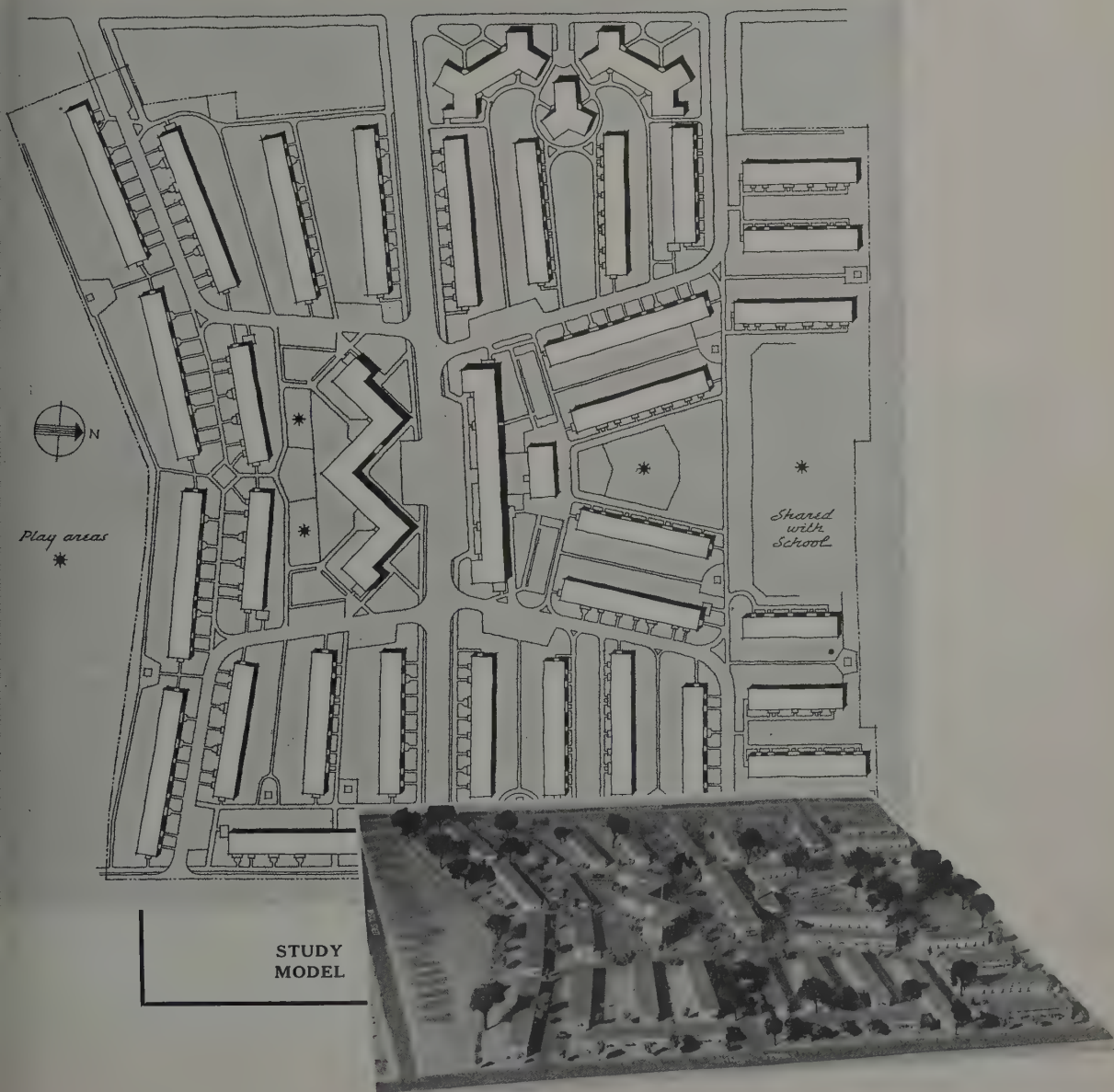
WILLIS A. VOGEL

War Workers are now finding homes in...

ELM HAVEN

Low-rent Housing in New Haven

BY DOUGLAS ORR AND R. W. FOOTE,
Associated Architects





THEN

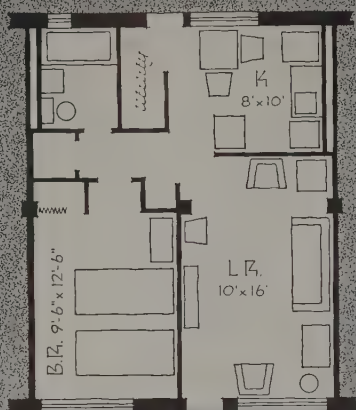
NOW



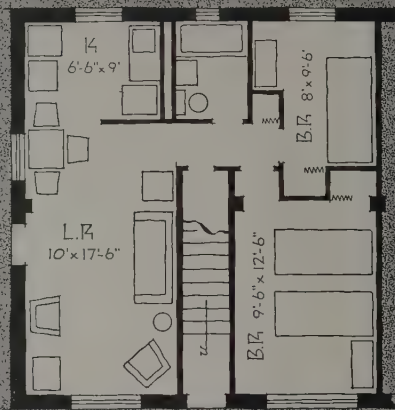
Project of the month on two counts is Elm Haven because (1) it has become virtually a war workers' community, with employees of New Haven's materiel plants finding homes there; and (2) because it is the project chosen for commendation in a Case Study of low-rent housing that will be handed to FPHA in a week or so from the Committee on Revision of Standards and Design, headed by Howard Myers, Editor of "The Architectural Forum." The study has just been completed by George Nelson and Talbot F. Hamlin, under supervision of Don Hatch, Sub-Committee Chairman. Originally undertaken for USHA, this is described by Hatch as a "critique of the project from the outsider's point of view." It will be supplemented by a more detailed review prepared by the Architects and Albert Mayer (who served as Consultant), B. M. Pettit, and Ernest Bohn. Richard Garrison's photos show the pleasant unaffected character of the community: also the practical services, such as the spacious drying yards and one of the 13 refuse incinerator units (below) conveniently located



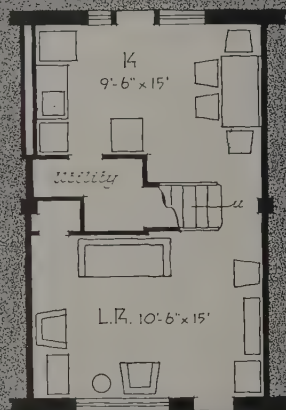




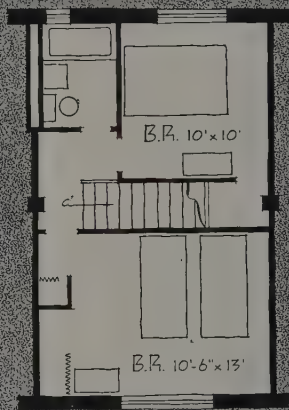
One Floor Only
3 ROOM FLAT



One Floor Only
4 ROOM FLAT

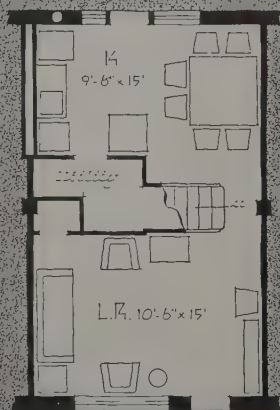


First Floor Plan

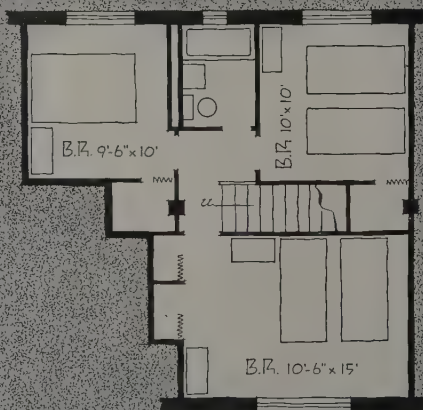


Second Floor Plan

4 1/2 ROOM UNIT



First Floor Plan



Second Floor Plan

5 1/2 ROOM UNIT



Simplest means were employed to lend variety to these buildings. Cast iron grilles in several related patterns adorn the ENTRANCES, which are roofed with corrugated protected metal, and the terracotta panels framing the doors are green, Indian red, and bright yellow. The exposed concrete beam at the roof line is painted brick red and accents the copper fascia. The tenants, expected to keep their own dooryards, take pride in planting shrubs and flowers. Some have made Victory Gardens—all are encouraged by Manager George Binen to contribute to attractiveness of the community. There is liberal planting space and most of the site's fine old elms were saved when the new community was planned



MATERIALS AND EQUIPMENT

Footings	CONCRETE
Foundation walls	CONCRETE; local RUBBLE STONE used where excessive footings required
Terraces	CEMENT, MEMBRANE WATERPROOFED, 2" walking surface on top
Waterproofing	Two coats of PITCH in basements below grade; SPANDREL WATERPROOFING every floor level; FABRIC FLASHING trowelled in mastic
Wall construction	8" BRICK WALLS for row houses; 12" and 8" walls for apartment buildings
Wall insulation	Aluminum foil gypsum wallboard
Floor construction	REINFORCED CONCRETE
Roof	TAR AND GRAVEL with copper fascia on all buildings
Roof insulation	1 1/2" fiber board
Sheet metal	Protected corrugated door-hoods
Windows	STEEL CASEMENTS and SCREENS, housing-type
Doors	Wood, stained to match interior trim
Floor finish	ASPHALT TILE in three colors: brown, Indian-red, and mahogany with black border varying with four color schemes used throughout; metal base trim
Interior wall finishes	Sand-finished buff-tinted PLASTER with trim of gray-green, gray-blue, blue-gray or Indian-red to complement terra-cotta door entrance panels
Plumbing	BRASS pipe, CAST IRON fixtures, combination sinks and laundry tubs
Heating	CENTRAL VAPOR SYSTEM, also supplying hot water to all apartments and houses
Other equipment	Metal cabinets in kitchens; 13 incinerator units, each equipped with double set of hotel size garbage cans and reserved racks
Electric wiring	CONDUIT type; with plastic reflectors in principal rooms
Ceilings	CONCRETE painted with rosin emulsion



PROJECT PHOTOS BY RICHARD GARRISON

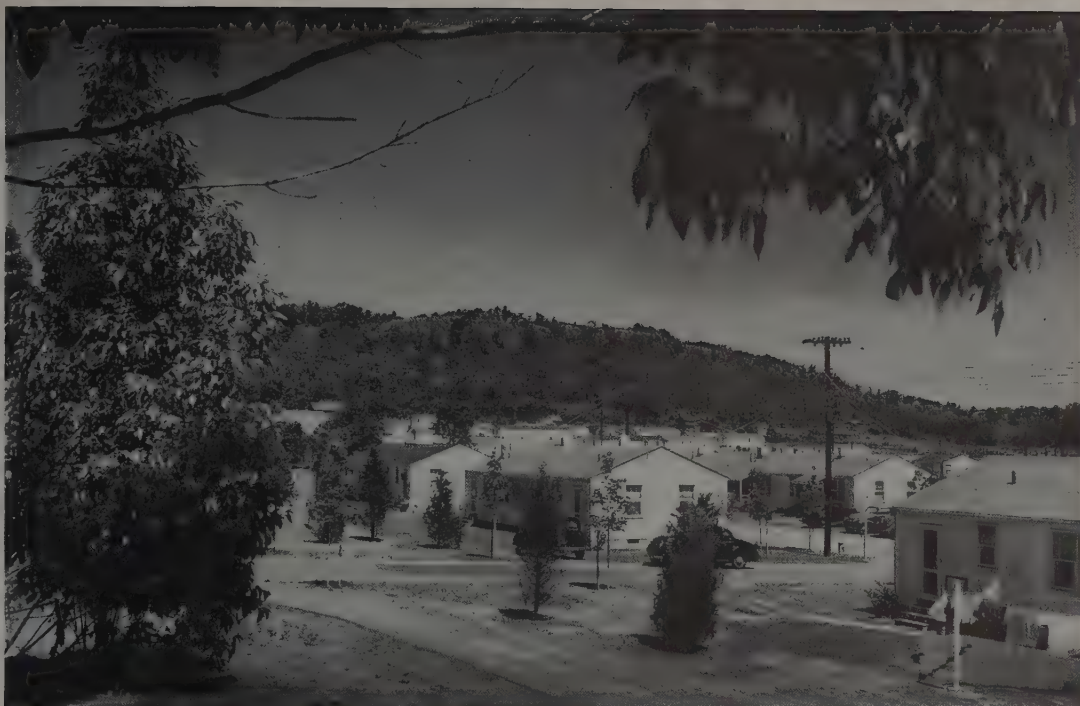


Although basic patterns of old street lines had to be considered (see site plan page 27) the project buildings are freely disposed. The community building—social hall, offices, and heating plant — (view across-page) is behind the apartment building shown below. The building at left, largest in the community, has a “W” form. Some tenants say they would prefer several smaller play areas rather than the large one back of the community building and more walks throughout—but all respond more enthusiastically in praise of the community and its facilities. Within 200 feet of every dwelling there is a parking bay off the paved street; schools, stores, churches, and clubs are in the surrounding neighborhood. Just across Dixwell Avenue is a closed Police Station that was one of New Haven’s busiest when this was a crowded, crime-breeding area. Requirements of New Haven Building Code were observed in this U.S.H.A. project. The architects enjoyed collaboration of Bertholf M. Pettit, Director, New Haven Housing Authority; Frederick A. Davis, Jr., Landscape Architect; and Hubbard, Rickerd & Blakeley, Engineers. It was built by William L. Crow Construction Co., of New York



Neighbors have formed homemaking clubs in Elm Haven and are encouraged to furnish their dwellings at minimum cost. The kitchens (above and left) are provided with combination tub and sink, stoves, metal wall cabinets, large storage closets. On upper floors the kitchen doors open on metal balconies which connect adjoining apartments (serving as fire escapes). The living room (below) is comfortable for the small family typical of this community of 487 white and Negro families





PHOTOS BY RICHARD GARRISON

ACQUACKANONK

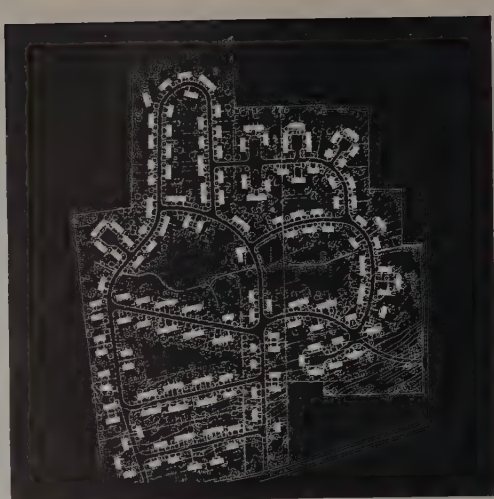
Henry S. Churchill, New York, Architect

IN developing an 80-acre tract at Clifton, New Jersey, as a home community for war workers employed by airplane and materiel factories in a radius of 10 miles, the Architect's problem was to provide at minimum cost the shelter and conveniences required for 350 families. Existing public utilities were tapped, the site planning made the most of the sloping contours of the property, and the houses were located to afford as much privacy as possible without actual division barriers. Then the pleased management and tenants fell heir to the stock of a large landscaping nursery that had used this site and it was possible to have shrubs and flowers in every dooryard, as well as in the communal areas.

To the asbestos-shingled buildings of Acquackanonk, variety in texture and color is introduced in brightly-painted panels of siding on several of the house fronts—lattice in simple patterns being used only on the PBA designed houses located in the last blocks completed. These tenants all have rooms of comfortable size, individual heating units, all the air and sunlight of a

(Continued on page 37)

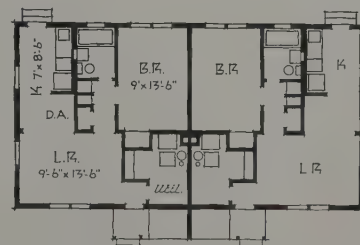
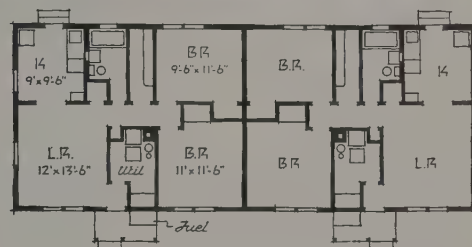
The original site plan (right) was not realized because PBA houses of standard design line the roads on the southwest half, intended by Churchill, to receive the larger units. General contractor for the project was James E. Mitchell, Inc., Jersey City, N. J.





New Jersey hillside with an eastward view of the horizon and Manhattan's skyline. In the interest of economy, sidewalks, basements, garages, and a community hall were omitted in this war workers' community, which was designed under PBA regulations, then completed and now being operated under FPHA of NHA, with Joseph B. Belay as Manager.

Churchill, who received his M. Arch. in 1916 from Cornell University, has practiced since 1923 and studied housing in this country and abroad. He has also been the Architect of residences, apartment and office buildings throughout the greater New York metropolitan area. As one of the founders and a director of the Housing Study Guild, a pioneer study group, he was instrumental in publication of numerous technical bulletins in that field. He also participated in the study of early projects, was one of the Architects for Queensbridge Houses and Fort Greene, served as Consultant to USHA, New York State Division of Housing, American Standards Association, and other bodies. He has lectured on housing and site planning at Columbia University, M.I.T., and Cooper Union. He is author of a number of technical and popular articles on housing and architecture.



Directness and flexibility of the basic dwelling unit is revealed by the photograph and plans above showing three variations. Note coal boxes on the entrance porches. The chimneys are for individual furnaces. (Garrison photo)

PARKING BAYS are conveniently located around the project so that the tenants can leave their cars within a few steps of the dwelling entrances. These are paved with the same asphalt pavement used for the streets of the community. Houses in this street are at an angle, lending more interest to the vista and conforming to the contours

SEVERAL CUL-DE-SACS are employed (see site plan on page 36) to create small neighborhoods within the community. The one pictured at the right provides for 4 families on the end. The latter building is similar to the end building shown below



LIVING SPACE is provided outdoors for those who live in Acquackanonk. The photograph at left shows the use of shrubbery as a screen for the area back of one dwelling unit which also can be reached from the building at the end, through the opening in the hedge. Back and front, the buildings are simple



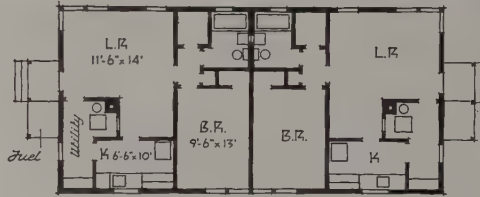
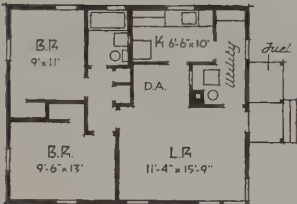
PLAY AREAS were being completed when the project was photographed by Richard Garrison, as the view at the left shows. Buildings are the same as those on the left side of the street directly across-page. They typify the openness of the project, with sun and air on all sides of every unit



CURVING STREETS were introduced in the project to lend variety; also to facilitate placing the houses for better orientation. The photo at left illustrates Churchill's facility in locating the units—the last one on the curve (see unit on upper left corner of site plan on page 36) placed at an angle, is a pleasant surprise

VENDORS CALL in their trucks with bakery products, meats, dairy products, and groceries to sell to housewives living in Acquackanonk. The trucks circulate through the project, the drivers making regular rounds daily. The existing trees were left to relieve the bareness typical of every new community

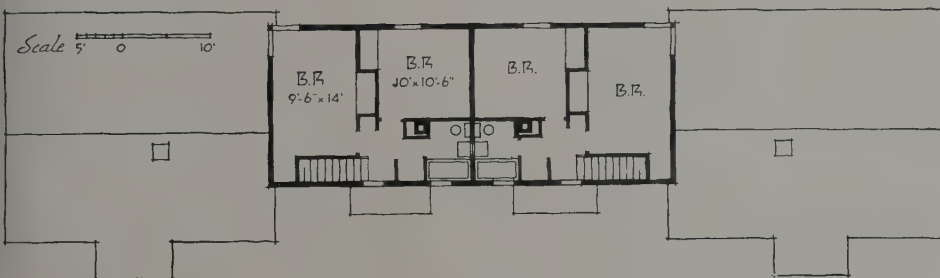
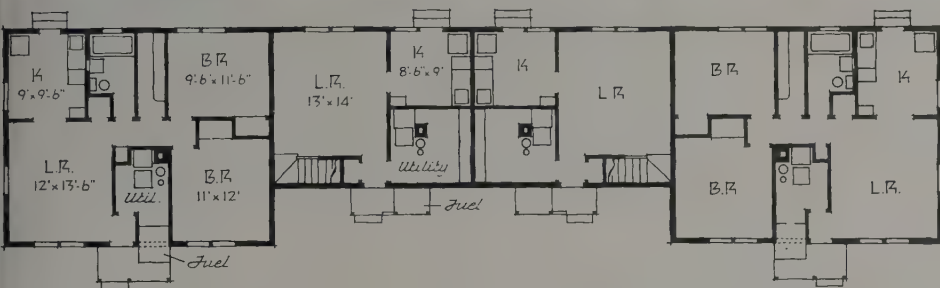
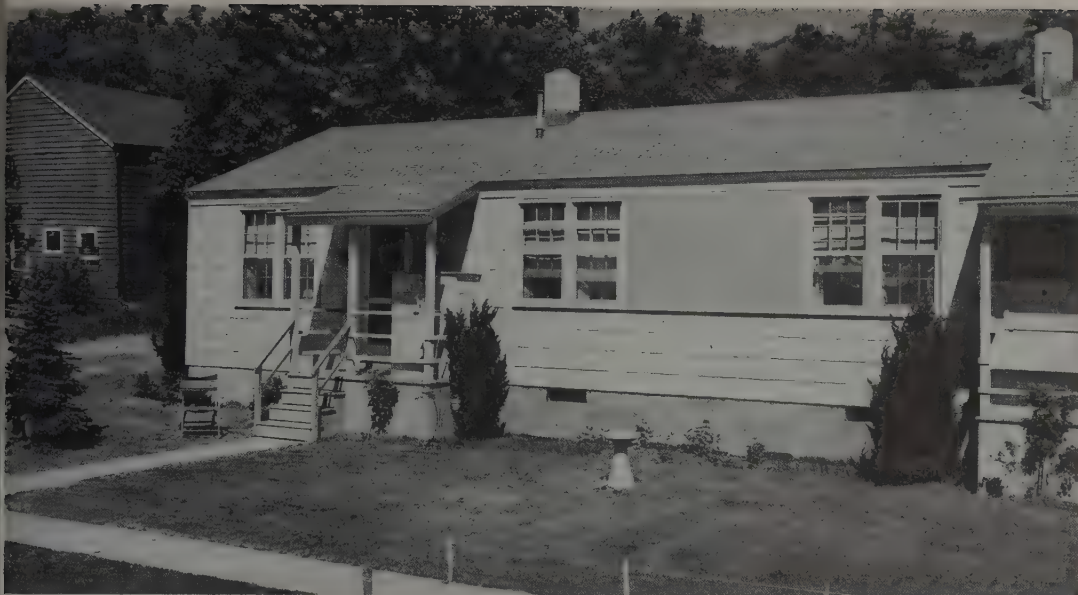




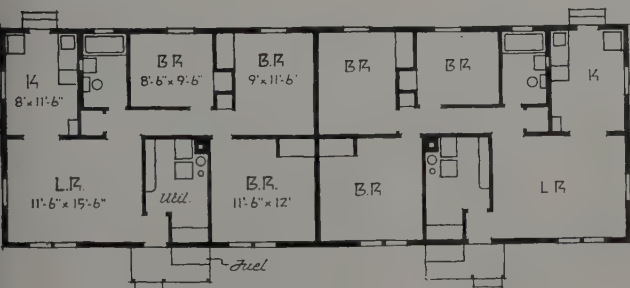
PBA units of standard design (two types shown here) were built in the last section of Acquackanonk to be completed. Note convenience of the parking bay (shown in foreground) to the house, approached by a cement walk

MATERIALS and EQUIPMENT

Footings	CONCRETE
Foundation walls	CONCRETE BLOCK 8" x 8" x 16"
Walls	WOOD FRAME and SIDING with white asbestos shingles
Party wall insulation	WOOL BATTING (4")
Floor construction	WOOD, double (hardwood top floors)
Roof	ASPHALT SHINGLES
Roof insulation	TARPAPER
Ceiling insulation	WOOL BLANKET (1")
Sheet metal	GALVANIZED IRON, 26 gauge, for ducts, flashings, etc.
Windows	WOOD, double sash
Doors	WOOD paneled (faced with asbestos board in furnace rooms)
Floor finish	Sanded and sealed, some finished with commercial wax
Interior walls	PLASTER BOARD
Interior wall finish	PAINTED ivory, green, pink or blue
Plumbing	COPPER and GALVANIZED pipes (3/4")
Other equipment	Kitchen cabinets; medicine cabinets
Heating	INDIVIDUAL COAL-FIRED FORCED-AIR UNITS
Electric wiring	BRAIDEX cable; porcelain fixtures
Ceilings	PLASTER BOARD



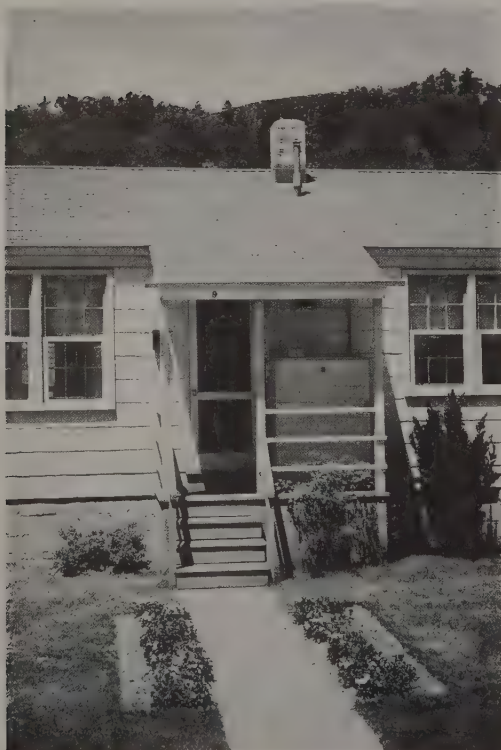
The basic units were ingeniously combined to make the larger buildings of the project without sacrificing privacy for each family. The photo above shows one of the decorative panels of painted siding





KITCHEN of each dwelling at Acquackanonk is well lighted and ventilated (left). The combination sink and laundry tub, the stove, and metal cabinet over the sink constitute the equipment provided. The tenant of the apartment photographed added the other furniture

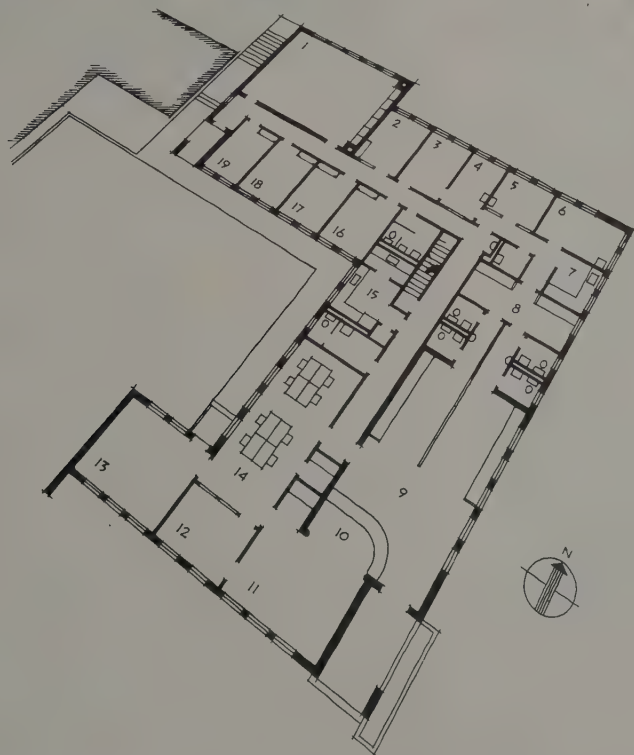
LIVING ROOM of the typical dwelling unit is large enough for the furniture required by the average family. Only 30 percent of those living at Acquackanonk have children. For these there is a grade school less than a mile away, and generous play areas are provided



TENANTS TAKE AN INTEREST IN THEIR HOMES, as shown by the planting around this entrance photographed by Richard Garrison (left). Beyond is the wooded cliff that dominates the site. The land is good and some of the men, principally those who work on the night shifts in the factories, have started Victory Gardens. All seem to like the accommodations provided, the openness of the community, and the clean new houses. Planting space is generous since there are areas maintained by the management around the community office and play fields, in addition to the yards of the dwelling units. The project is near shopping centers of both Clifton and Paterson and there is bus service on minimum schedule. The men drive to work in their own cars, usually form groups of four or six for war economy



PRESTON M. GEREN
Architect & Engineer



1. CONFERENCE ROOM AND LIBRARY
2. DISTRICT ENGINEER
3. DENTIST'S OFFICE
4. OPERATING ROOM
5. DOCTOR
6. CLINIC
7. UTILITY ROOM
8. WAITING ROOM
9. RECEPTION ROOM
10. INFORMATION
11. CLERK'S OFFICE
12. CHIEF NURSE
13. DEMONSTRATION
14. NURSE'S ROOM
15. LABORATORY AND DARK ROOM
16. ENGINEER
17. SANITATION
18. DIRECTOR
19. ASSISTANT DIRECTOR

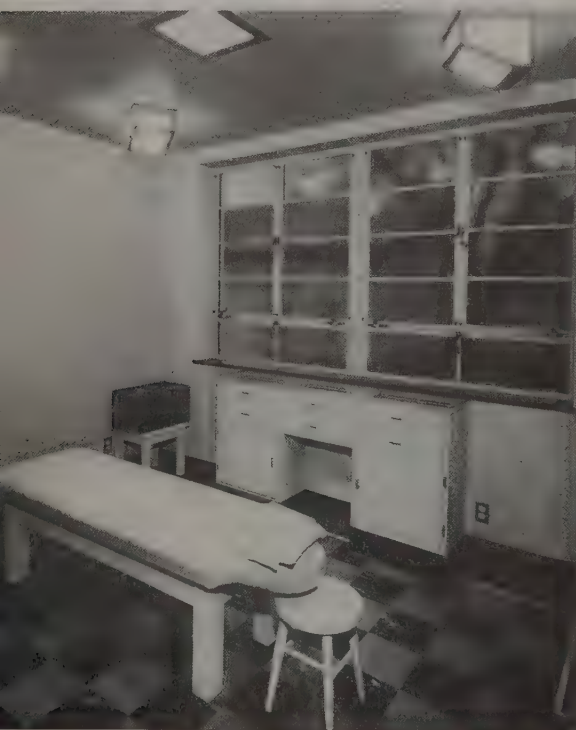
TARRANT COUNTY HEALTH CENTER

"Where construction of new schools and hospitals is essential the authorization will be limited to temporary buildings, probably the one-story frame type."

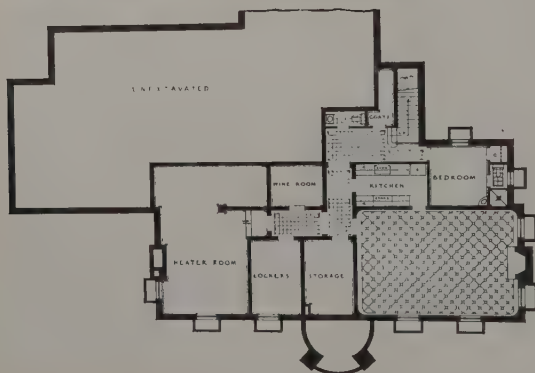
F.W.A. Administrator Fleming

EYE CLINIC for Dr. Watson W. Gailey

SCHAEFFER & HOOTON,
Architects
Bloomington, Illinois



For a well-known Eye Specialist, whose very large practice suggested a private clinic near the hospital where his major operations are performed, the Architects designed the building shown above. The site, well-tended grounds of an old residence on the edge of a business district of Bloomington, suggested a modified residential character. The main floor is devoted to the clinic, with a caretaker's apartment and utility rooms in the basement, adjacent to a reception room where Dr. Gailey entertains and also delivers lectures to visiting Doctors. The requirements were: an entrance lobby and waiting room to accommodate 30 people at a time; a business office controlling the entrance and exit of the work space; offices off the lobby for Dr. Gailey and a receptionist; examination rooms, 4 treatment rooms, 4 dark rooms (photo at left, above), a field room, scope room, operating room for minor operations (photo at left, below), recovery and sterilizing room, and an office and library for Dr. Gailey's assistant.



telesis

telesis: progress intelligently planned and directed; the attainment of desired ends by the application of intelligent human effort to the means. (Webster)



CORBETT

OLIVER

My dear Reid:

I am very grateful to be able to accept your invitation to help present the work of Telesis and only regret that the assistance is limited just as is the available space and time at our disposal. I am grateful for two reasons: First, because I believe that Telesis is making an important contribution to the establishment of the very base from which the New Architecture must spring; and second, because your invitation has given me a long-desired opportunity to repay, in however small a measure, a great personal debt I owe as a foreign architect to the members of Telesis — good friends in the West, without whose understanding, encouragement, loyalty, and help in the last year or so, the transition period would have been immeasurably harder, and the belief that modern architects everywhere speak the same language unrealized.

Yours sincerely,

Leopoldo Chiaromonte

THE BIRTH OF A GROUP

ONE would think that to define one's aims, to say what the work was for, to state the problem, was an essential preliminary to the rolling up of sleeves anywhere away from the moving belt.

The statement of the problem confronting Planners and Architects, granted that contemporary needs differed from those of an ancient Greek, was one of these obvious necessities. This obviousness, however, managed to escape the majority of the very people whom it most affected.

The story of the statement of the contemporary problem is really the story of Modern Planning, Architecture, and Design generally. In it, Telesis is an important chapter. This tale, or thesis, or whatever, is a sort of an Architectural Declaration of Independence to which had to be appended a Bill of Rights to be consulted wherever problems of physical environment might arise.

All those who persisted in this apparently thankless task were frequently geographically separated—most for many years had no direct contacts or opportunities for exchange of ideas on general or specific issues. Neither Authorities nor Industry nor the Press gave them the hearing or the facilities which were obtained by Science and Technology. In spite of these handicaps, their separate findings have added up to what is now revealed as essential processes to meet fundamental needs. Today we have the product of this immense and widely disseminated work by Americans, English, Germans, French, Rumanians, Poles, Swiss, Dutch, Spaniards, Scandinavians, in the form of an international philosophy, transcending political and other boundaries.

This philosophy is the essence of Henry Wright, Geddes, Gropius, Mumford, Corbusier, Unwin. For the majority of the

younger Planners and Architects, there are among these men superficial differences but no fundamental disagreement.

Telesis is one of the many signs of promise of new things which will preserve and enrich decent human values in spite of civilization's temporary aberrations.

Its story is to be more clearly seen in true perspective if it is read as part of the history of the whole movement toward architectural cooperation and away from professional competition. Regarding it thus does not in any way detract from Telesis' achievement but throws a light on its particular value. The earlier chapters of this history were written by C. I. A. M. (Congres Internationaux d'Architecture Moderne), out of which grew C. I. R. P. A. C. (Comite International pour la Realisation des Problemes Architecturaux Contemporains) and national organizations like M. A. R. S. (Modern Architectural Research Group) in England. The significance of Telesis will be better understood through the reading of the book of the 5th Congress of C. I. A. M. about to be published by the Harvard University Press.

The exciting story of Telesis is really best told in the San Francisco Group's own words—excerpts from Reports and Publications:

"In the fall of 1939, a few architects, designers, planners, and landscape designers began meeting at frequent intervals. Each discussion became more detailed, as information was collected. The chief concern was the growing confusion of the bay area from a planning standpoint. In spite of the scale of the project, they began making plans for an exhibit that would show their fellow residents of this region why things had gone so badly in the last fifty years and what was to be done about it.

"First of all, in order to consolidate the group, a credo was drawn up in which the aims and beliefs of the group were made clear. This had a marked influence in also clarifying their ideas on the proposed exhibit and also produced the name 'Telesis.'

"It is interesting how enthusiastic people become when a plan is made that is based on a real need. Help for the exhibit came from the San Francisco Museum of Art. It was felt that past architectural shows had not hit the spot with the general public, and that something of much more general interest than how to build a home charmingly for the



LAND

Land and people . . . these are the basis of an environment. For all human activity is on or for the land—by or for people • To build a rich environment of these elements, man must act, to reach the desired end by intelligent purpose. Thus far, concerted effort to this end has been nil—our present environments result rather from haphazard or ineffectual planning, and as often from unintelligent exploration • There is the problem

Doing Something About It

November and December 1939. Two independent groups, one in San Francisco the other at University of California, joined together

August 1940 to December 1940. Research groups are appointed to investigate "Recreation," "The Speculative House," "Industrial Design and the Interior," and "The Physical Factors of the Bay Region and their Relation to an Indigenous Architecture." A lack of adequate working space for the group is mulled over along with the ever present spectre of the diminishing budget.

A series of panels based on research of the Bay Region were prepared by the group for the hearings held by the State Planning Board, to establish the San Francisco Bay Regional Planning Commission. These panels were later transferred to the San Francisco Museum as a follow up of the previous exhibit and were later exhibited throughout the region.

The usefulness of the San Francisco exhibit was not ended with its brief month at the Museum of Art there. The following March, it was reassembled in the Seattle Museum of Art where it attracted as much attention as it had in San Francisco.



PEOPLE

—and the challenge to human effort • What makes up our environment . . . that we may better it? SPACE for LIVING . . . SPACE for WORK . . . SPACE for PLAY . . . and for the SERVICES that which integrate these and make them work. These must be coordinated by conscious planning • What can be done? What is being done now? Who are actively working? Not enough are working . . . but some. They need your help

January 1941 to March 1941. The Architectural Association of Chicago requests that the TELESIS EXHIBIT be sent to them but no funds were available for that purpose.

The Women's Center of San Francisco requests TELESIS to conduct classes on city planning.

The California Federation of Arts asks that TELESIS affiliate with them.

More newspaper articles concern themselves with the importance of the group.

TELESIS composes a letter to the City Planning Commission concerning the imminent appointment of the new regional architect.

May 1941 to December 1941. A traveling exhibit is designed by Sydney Williams and Walter Landor for California Housing and Planning Association.

The San Joaquin Valley Resources Planning Board proposes that TELESIS lay out a traveling exhibit for them that will familiarize all the inhabitants of that region with their more acute planning problems along with proposed solutions for them—much in the same manner as the previous TELESIS exhibits. Tentative budget is planned, and discussion as to the technics involved follows.

retired business man was in order. Dr. Morely, Director of the San Francisco Museum of Art, offered Telesis the big south gallery of the Museum in the heart of San Francisco where 'the man in the street' could just walk in and have something to look at and maybe compare intelligently to what he saw on his return into the street.

"The exhibit was a great success—that is, if bitter and complimentary comments of all kinds in the newspaper mean anything—and there were a lot of them. Every member of the group was assigned a number of days, during the month that the exhibit was on, to sit in the lounge area of the exhibit and answer questions as well as to draw out ideas from 'the man in the street.' What seemed most apparent was that this 'man in the street' had a great enthusiasm for sunshine, light, space, and easily attained recreations—the very things that the congestion of their city was denying them.

"The following months brought many responses from all over the country. People who had seen the exhibit had told others about it and what it had tried to bring out about the way they were living. A Telesis group formed in Los Angeles and has recently held an exhibit, embodying their ideas about the city of Los Angeles. Letters came from Seattle and various cities on the east coast as well. Wherever people had been worrying about the inadequate planning of their cities, because they had heard that someone in San Francisco had been worrying too, they felt encouraged and asked either themselves or their associates what could be done.

"In the meantime Telesis was busy with its second publication on planning. (The first one was the catalogue for the Exhibit.) Publication #2, 'The Next Step Toward a Regional Plan for the San Francisco Bay Area,' received an immediate response from planning bodies all over the country.

"It would be unrealistic in the extreme to say here that recent world events have not had their effect on the activities of Telesis. Some of its members have been enlisted in the various government planning agencies that are concentrating on the immediacies of defense. This has slowed down the plans of the group but the idea is well established and when these emergencies have been served, there will be a working basis for the equally urgent reconstruction period."

THINGS TELESIS HAS FOUND IMPORTANT

Introduction: The following is a statement of the conclusions arrived at in the discussions so far. It is intended to represent in organized form the beliefs discovered to exist in common among the members of the group. It is meant to be used for purposes of reference and study; it is not to be considered final, but rather open to criticism by new members, either in general form or specific content, and to change as the need arises.

BELIEFS (Who) We, as designers of the new environment cannot be effectively designed by isolated individual efforts, have organized in the spirit of cooperation and personal anonymity so that by collaboration in our efforts we may encourage scientifically significant work.

(Why) We recognize that there are basic social and economic forces at work bringing about a new environment and believe that it is our duty to thoroughly understand these forces that we may intelligently interpret their significance in planning man's environment.

AIMS (What) Recognizing that in former periods arbitrary esthetic patterns have been imposed upon man's social life, we believe in that environment in which the local social, economic, and physical characteristics are recognized, and from these significant forces the esthetic considerations are derived.

We believe in a state of society:

- (a) in which the individual is the module,
- (b) in which the most favorable environment exists for the development of all the arts and especially for those most closely related to human life,
- (c) in which the creation of the physical environment is consciously related.

PROGRAM (How) Since the social costs of unplanned development are becoming ever greater, it is the duty of the designers of the new environment to demand scientific, comprehensive planning and to acknowledge that the scientific method is the dominant attitude or force in the creation of the new era.

(What) We propose, in orienting ourselves within existing forces, to make actual contact with them in order to understand them and their directions and to use them to influence the designing of the new environment. Therefore, we propose to sponsor research, advertise our beliefs and the results of our research, lend support to organizations whose ideals and programs are allied to our own, and to extend our awareness to other groups. Anyone will find, who has gone into a large scale analysis of a community problem, that he is constantly faced with the spectre of suspicion from the outsider. There is a violent prejudice against group thinking because it might be the next step to "mass" thinking. This is generally conceded to be un-American. This suspicion has scared many a worthy public-spirited body into inaction. Telesis has experienced it, but the results have belied the spectre. It's the jobs accomplished that have made new project easier. The need is there and if group effort will meet it, then let there be group effort.

There is nothing mysterious or totalitarian about this planning. It is in essence foresight based on study and experience. Most of our cities and counties today have planning commissions of public-minded citizens who work for orderly and economical development of our communities using such means as Zoning, Official Plan Lines and Master Plans for Highways and Recreation as their tools. Regional Planning is a logical method of coordinating the work of these individual agencies and of solving the problems that cut across city and county boundaries.

Telesis is not interested in utopias, but is vitally interested in the improvement of the living environment here and now, under existing social and economic conditions, and with the present legislative machinery.

People and the Land make up the environment which has four distinct parts—a place to Live, Work, Play, and the Services which integrate these and make them operate. These components must be integrated in the community and urban region through rational planning, and through the use of modern building technology.

PORTABLE HOUSING

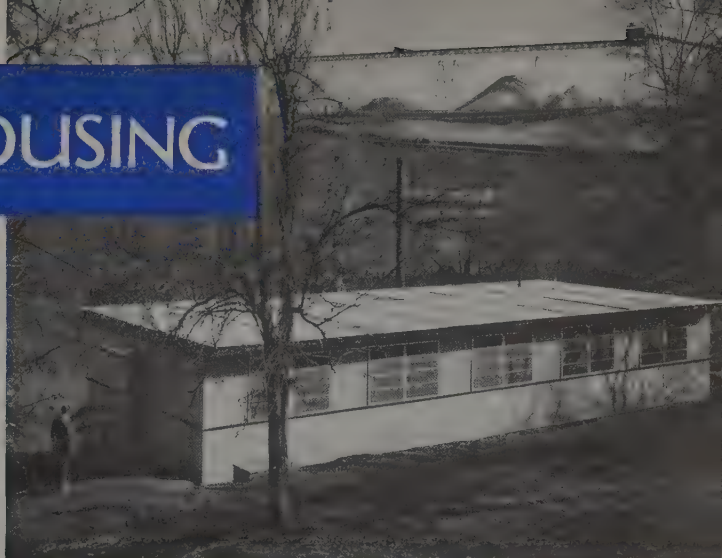
TVA EXPERIENCE LEADS TO TRAILER-HOUSES

by CARROLL A. TOWNE

Chief, Division of Recreation and Public Grounds, Department of Regional Studies, TVA. Mr. Towne has directed development of TVA truckable and trailer construction and, with the assistance of WOODRUFF H. PURNELL, devised most of the features or processes required for demountability. S. HARRISON GURNEE designed the two-cell homes, MAURICE ABRAMOWITZ the dormitories and recreation building, and ABRAHAM W. GELLER the trailer houses, under supervision of ROLAND A. WANK, Head Architect for TVA. Mr. Towne warns: "If this article seems historic rather than prophetic, remember it was written a month before publication." In summing up TVA experience, he observes:

"Producing THE solution to the low cost housing problem, like producing a rabbit out of a hat, is a trick for magicians, not technicians. There are lots of ways to build low-cost houses, all good for the purposes they were designed to serve. The trailer house, shown on pages 53 to 56, can serve a purpose for TVA, and that's the reason it was designed.

"Coincidentally, it may serve a larger purpose. Housing shortages block war production all over the country; the trailer house, built cheaply and quickly, highly mobile, may offer one means of relief. It is strictly temporary shelter, offering performance at the expense of permanence, but that, like it or not, is what the average American looks for — and gets — in nearly everything he uses. To the manufacturer looking for a market sustained by quick turnover of a product with a short life but high sales appeal, the trailer house, or something like it, may look good. That's what made the automobile industry."



EIGHTEEN major hydro-electric plants have been built or are now under construction by the Tennessee Valley Authority on the Tennessee River and its tributaries. All but a few are in sparsely settled areas; to accommodate employees, the Authority had to build housing. Depending on relative distance from existing communities, duration of construction and number of men on each job, TVA housing has ranged from dormitory camps to complete residential communities with dwellings, schools, hospitals, stores, and community centers.

When the current program is completed, TVA will have provided more than 800 dwellings and dormitories for more than 6,000 persons. In addition, over 1,000 war workers' houses, now completed or under way in the Tennessee Valley, were designed (and in part built and operated) by TVA as agent for FPHA and its predecessor, FWA.

THE NATION IN MINIATURE

In many respects, routine housing problems faced by TVA for eight years resemble, on a small scale, those

Open-air assembly lines at Sheffield, Alabama, with 2-section houses in progress. Same principles were used for dormitories like the one shown above.



Moving Costs Reduced



1938: Seventy-two conventionally-built cottages floated 200 miles downstream, from Pickwick Landing to Kentucky Dam. Not built for transport, these were racked en route, but were relatively easily rehabilitated. Moving cost, including repairs, was about \$1280 per house—not cheap, but still less than the cost of a comparable house built in place.

now facing the nation at war. Today those problems change almost daily, as one essential building material after another becomes "critical." Again, the Authority's employee housing problem has always been one of balancing **costs** commensurate with short-term occupancy against the occupants' **comfort and health**. However, because nearly all housing built by TVA has been for its own use, the Authority has been free to experiment; whereas a national emergency housing program is necessarily somewhat restricted by the standardization required.

TVA has given much thought to costs. It takes three or four years to build a dam. What kind of homes should be provided for workers? In the first several years numerous schemes were tried, all aimed at reducing construction costs without unduly shrinking standards of space and amenities. The successful Hiwassee house provided about two-thirds the floor space required by current war housing standards, and achieved an absolute minimum of equipment: walls of insulating board, galvanized metal roof and flue, inexpensive plumbing equipment and fixtures. Remarkably low costs resulted, and TVA is now building houses of similar size, but using fewer critical materials, at Fontana Dam in North Carolina.

PORTABLE: CONVENTIONALLY BUILT

The idea of moving houses from one construction project to another has always been a favorite topic of discussion in TVA. In 1938 the discussions bore fruit. Seventy-two houses originally built and used at Pickwick Landing Dam were moved from their foundations to barges, floated 200 miles downstream to the mouth of the Tennessee River to the construction village being built to house workers on Kentucky Dam.

This method was slow and clumsy, and would have been impracticable without river transportation. However, the basic idea was sound, and this demonstration gave impetus to the Authority's entry into the field of "demountable" housing.

PREFABRICATION FOR PORTABILITY

The original concept of the TVA "demountable" house was developed in 1934 by Louis Grandgent (then with TVA, now with FPHA), who prepared a detailed, illustrated description of a scheme for building a house so it could be separated into four or five sections, each of such dimensions that it could travel safely by truck and trailer over public highways.

In 1940, shortly after the Pickwick houses had been moved, an opportunity arose to test

from \$1280 to \$280 per House

his theory. Several cottages were needed quickly at a TVA dam. Principles developed by Mr. Grandgent, slightly modified, were incorporated in their design and they were built at Sheffield, Alabama, sixty miles from their destination. The whole project was highly successful.

FWA, observing the success of this experiment, requested TVA to build 150 demountable houses for defense workers in northern Alabama. Plans for one-, two-, and three-bedroom houses conformed to prevailing standards for defense houses built under the Lanham Act, had "demountable" features identical with those in the previous cottages, and were built on outdoor production lines at Sheffield and distributed to various sites in surrounding communities. All are now occupied by war workers.

Shortly after this project was completed, FWA awarded a contract for 300 "demountable" defense houses for western Tennessee to a contractor who used plans developed by TVA. Two hundred similar houses are now under construction in the same vicinity.

PROGRAMS ACCELERATED, PROBLEMS ACCENTUATED

The perennially delicate question of proper balance between cost and space was recently accentuated when TVA construction schedules went on emergency time rations, and building materials and labor became scarce. The two-section demountable house, developed for TVA use only, demonstrates the Authority's most recently completed effort to achieve both demountability and a mini-



1940: The first sectional houses built for truck transport. Prefabricated in units 7½ feet wide, 22 feet long, 9½ feet high, each weighing about 3 tons, these can move over highways in most states on 2- or 4-wheeled trailers hauled by light trucks. Techniques developed on this project have been applied to all subsequent "demountable" houses built by TVA.



1941: FWA requests a "demountable" for defense workers. To meet nationally standardized requirements, a pitched roof, hinged to let down flat in transit, was added. Otherwise construction and erection were similar, sections were trucked from assembly line to foundations, rolled onto foundations on 4½-inch wheels mounted in the floor framing.



1941: Same construction-for-portability principles for TVA's own housing, but more economical plans. As in all TVA portable houses, electric, heating, plumbing equipment is pre-installed; almost no loose building material is needed for assembly. Six men can unload and assemble a two-section house in 2 hours. Original cost per house, \$1900. Trucking costs: 30c per mile per section; total moving cost for 34 miles, \$280 per house including all site work except extending utilities.

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Principles of construction—and in many cases identical sections—used in 2-section houses have been adapted to several types of buildings. At lower left 4-section houses as well as 2-section units grouped in a community. Larger units were assembled by uniting 2-section units and cutting a door between. Kitchen fixtures of 1 unit were removed. The result is not ideal, but serves in the emergency.

Upper left, a 24-section dormitory built similarly to the house units. Upper right a 6-section recreation building (interior below) shows not only adaptability of the basic structural system to many types of buildings but also illustrates the Authority's policy of providing more than bare essentials.

mum of floor space which can be organized to permit normal family life. The result is, of course, approximate. But reports indicate that it appeals to families of all sizes, and is competing successfully with two-bedroom houses one third larger, apparently because it has superior equipment and more striking appearance. Other structures, built in the same pattern, illustrate the adaptability of the basic system.

Recent cost comparisons indicate that this type of demountable construction can be disassembled, moved to a new site and re-assembled on a new foundation at lower cost than can panel structures of comparable size, provided the distance moved is less than three hundred miles. On longer hauls panel buildings gain an advantage, because they can be packed in fewer truckloads. One hundred two-section houses, built on the

same Sheffield production line, were trucked three hundred miles to Murphy in North Carolina. A private contractor hauled them for thirty cents a mile per section.

Thirty of these houses were recently removed from Murphy to Hiwassee Dam, thirty-four miles distant. The whole operation, including preparation of a new site and new foundations, took four weeks, about twenty-five men, and two trucks and trailers. Moving costs approximate \$280 a house, including everything except charges for extending sewer, water, and electric services. The houses originally cost about \$1900 each at the plant, including electric stoves, hot water heaters, refrigerators, and oil burning space heaters. Some time within the next year they will be moved to still another project. With each succeeding use housing costs are materially reduced.

TRAILER CONSTRUCTION for TRAILER-HOUSES

Encouraged by the success of this attempt to bridge the gap between the trailer and the conventional house, TVA is now embarked on another housing experiment. Observing the rapidity with which trailers appeared at construction projects, and noting the marked similarity between a trailer and a section of

its "demountable" houses, the Authority decided to explore the feasibility of buying houses manufactured like trailers.

There were several reasons: The practice would release construction personnel; it would test another method of applying industrial techniques to producing houses; it

and now... TRAILER HOUSES



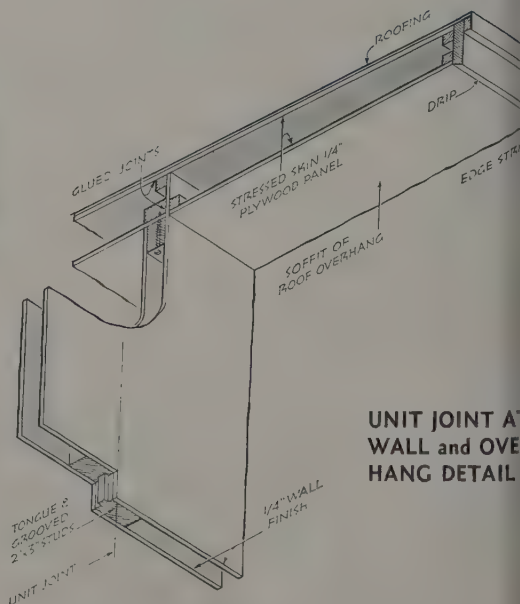
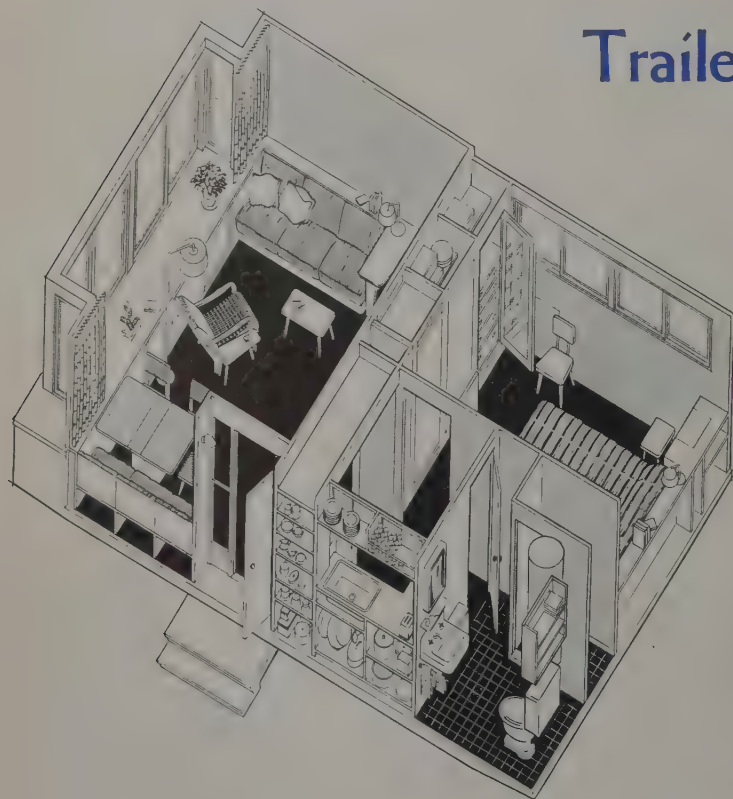
Built like a trailer, designed as a 2-section house, TVA's new Trailer-House releases construction personnel urgently needed for actual war work by making use of industrial techniques in house production. Each section, constructed of stressed plywood and so lighter in weight than preceding TVA units, costs about 15¢ per mile to transport. Costs for a complete trailer house are not now accurately determinable because mass production has not been begun; but contract price on four test units indicates that total outlay may be less than for comparable units conventionally framed.

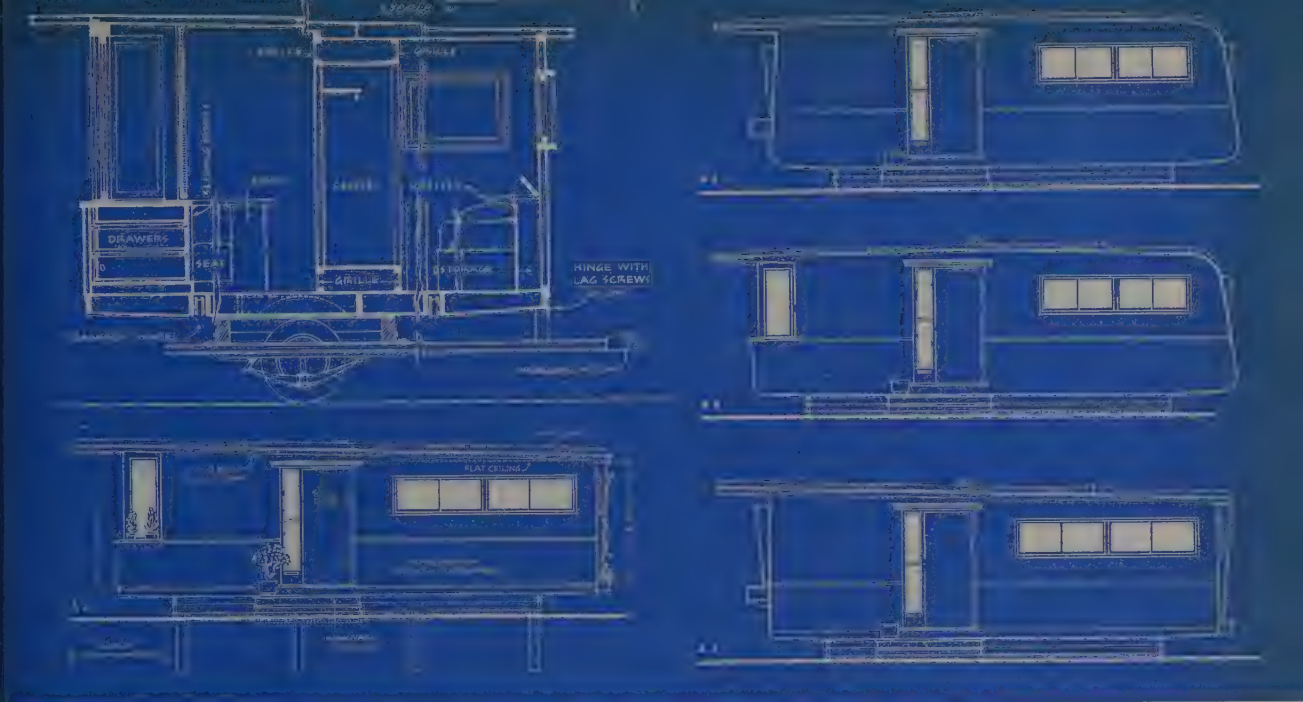




Plan is similar to the 2-cell house plan. Furniture, except for chairs, tables and a lamp or two, is built in; only by pre-planning the furniture can such a compact organism provide enough space for reasonable comfort. The isometric view shows how much space is really afforded—a surprising amount.

Trailer-House PLAN and

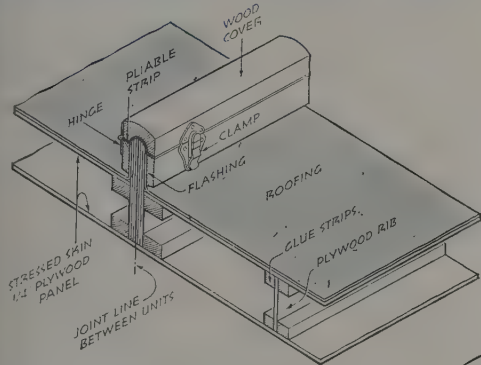




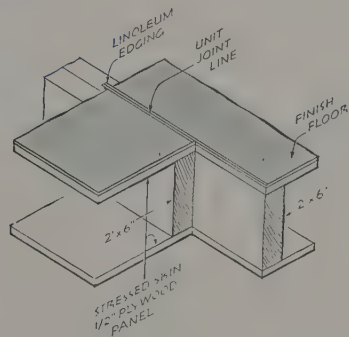
Section shows trailer-house construction, with lightweight plywood skins carrying the loads. Such construction has proved satisfactory for trailers, which have to withstand shock as well as normal loading. Comparing this method with conventional construction, even as modified for the 2-cell house, indicates potentially lower transport costs.

Not willing to decide without benefit of public reaction whether the trailer-house should look like a house or a trailer, TVA has let pilot contracts for two "house" models to one trailer manufacturer, and for two "trailer" models to another. A2 and A3 above are house models; A4 and A5, trailers. Plan, equipment, and construction are identical.

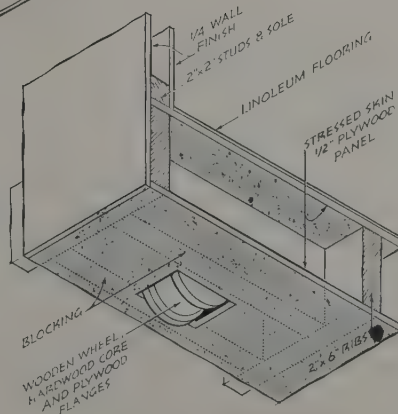
STRUCTURE are Integrated



UNIT JOINT AT ROOF



UNIT JOINT AT FLOOR



TRANSFER WHEEL IN FLOOR

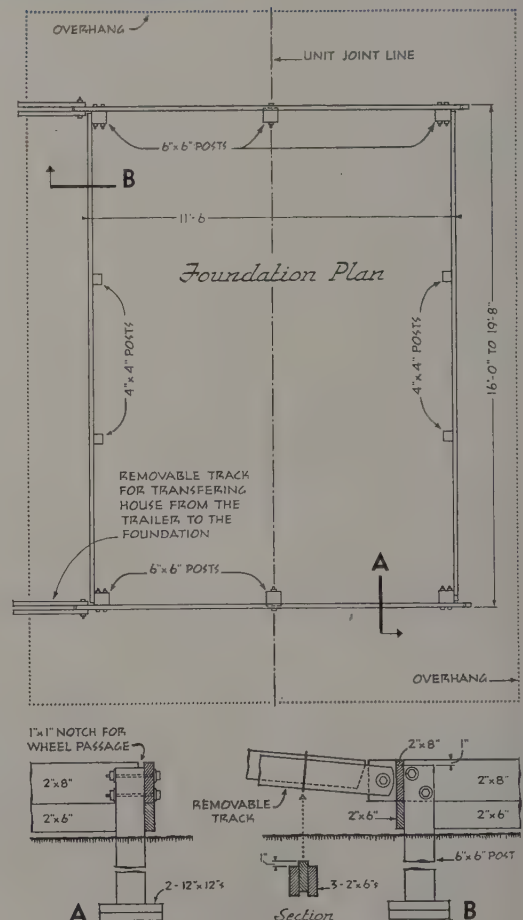


As photos of models (of the first scheme, which was later modified in accord with manufacturers' suggestions) show, first trailer-house section is driven up to a prepared foundation, jacked into position, moved over temporary rails onto foundation tracks. Same procedure is followed with second section, which is bolted to first. Roof-joint is capped, steps and entrance canopy are attached, and the housewife can move in her pots and pans. Open sides of section are temporarily covered while on the road. Assembly is expected to take driver and helper less than half a day.

appeared to meet the increasing national need to keep workers and a rapidly changing pattern of industrial activity together. Trailer construction would reduce weight (the critical economic factor in this design problem: fifteen cents a mile for transporting each house section, if built like a trailer in size and weight, versus thirty cents a mile for transporting each "demountable" house section). Such a trailer-house was designed with floor and roof of stressed-skin plywood panels and side walls two inches thick.

Preliminary plans went to nine trailer manufacturers for comment. Four replied in detail. The idea appeared practical; potential plant capacities were remarkable, and costs promised to be lower than for comparable units of standard frame construction.

On the strength of these replies, plans were restudied, and two new designs, each with two variations, resulted. To introduce a novel architectural form is always a hazardous undertaking. Once established, however, the form becomes a normal feature of the landscape, accepted by the public as reasonable and understandable. It therefore seemed wise to make a thorough test of the most promising alternatives before resolving a basic question of design. These experimental units are now under construction, and are scheduled for delivery in July.



DATA SHEETS

BY DON GRAF

BUILDER'S HARDWARE FOR 1 FAMILY WAR HOUSING

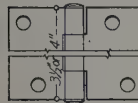
Index No.
D 22 a
WAR BUILDING

PENCIL POINTS DATA SHEETS PREPARED BY DON GRAF

Information herein is based on the War Production Board's Defense Housing Critical List. Numbers refer to Federal Specifications for Builder's Hardware, but these are modified as indicated by notes and dimensions. For each closet 8 coat hooks (of cast iron or steel wire) are permitted. Screen doors may have surface type, janned, cast iron or wrought steel hinges with coil springs, and ferrous catches, either rim or tubular mortise type. Letter boxes may be steel or cast iron, or letter slot may be used for single units.

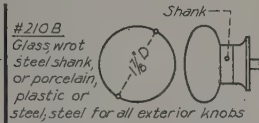
HINGES—ALL DOORS

One pair per door



#2014 1/2 D
Primed
3 1/2" x 1 1/2" door
4" x 1 3/4" door
Wrot steel

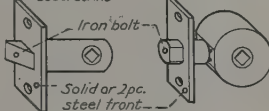
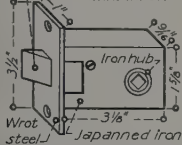
KNOBS—ALL DOORS



#210 B
Glass wrot
steel shank,
or porcelain,
plastic or
steel, steel for all exterior knobs

LATCHES—ALL DOORS

#28 Mortise, steel strike— or #150 tubular— or #161 cylindrical
—Iron bolt 3/8" x 1/2" x 3/8" ferrous, with
Min. throw steel strike

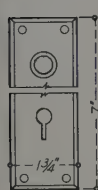


LOCKS—EXTERIOR DOORS ONLY

Rim Night Latch— or #154 Cylinder Night Latch
2 3/8" x 3 3/8" cast iron case, iron Steel, cast iron or die cast. Solid
bolt, brass 5-pin tumbler or 2pc. front; brass 5-pin tumbler
cylinder, 2 brass keys cylinder, 2 brass keys

REAR DOOR Mortise Bolt 1053A: Steel or cast iron bolt and strike,
wrot steel or cast iron turn-piece and plate.

ESCUTCHEONS—FRONT AND INTERIOR DOORS



Pendant
Wrot steel
cast iron
or plastic

or Rose
cast iron,
steel or
plastic



REAR DOOR same but
steel or cast iron on ex-
terior; cast iron or plastic
on interior

BATH

Knob or tubular stops on inside to lock against outside. Emergency entrance from outside.

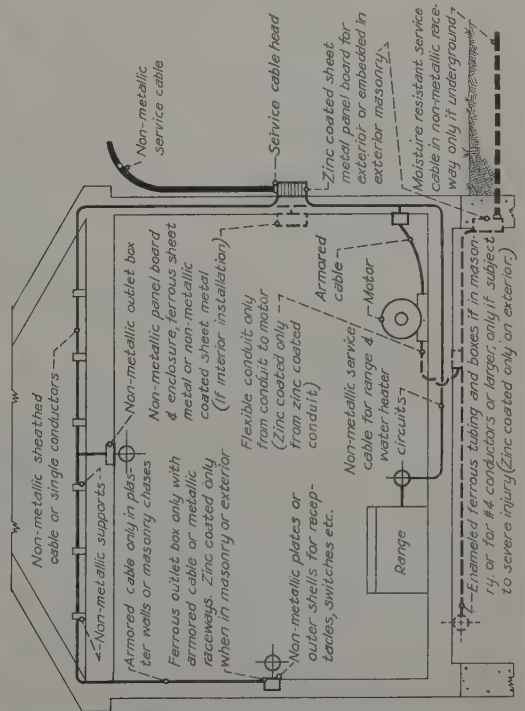
ELECTRICAL WORK FOR WAR HOUSING

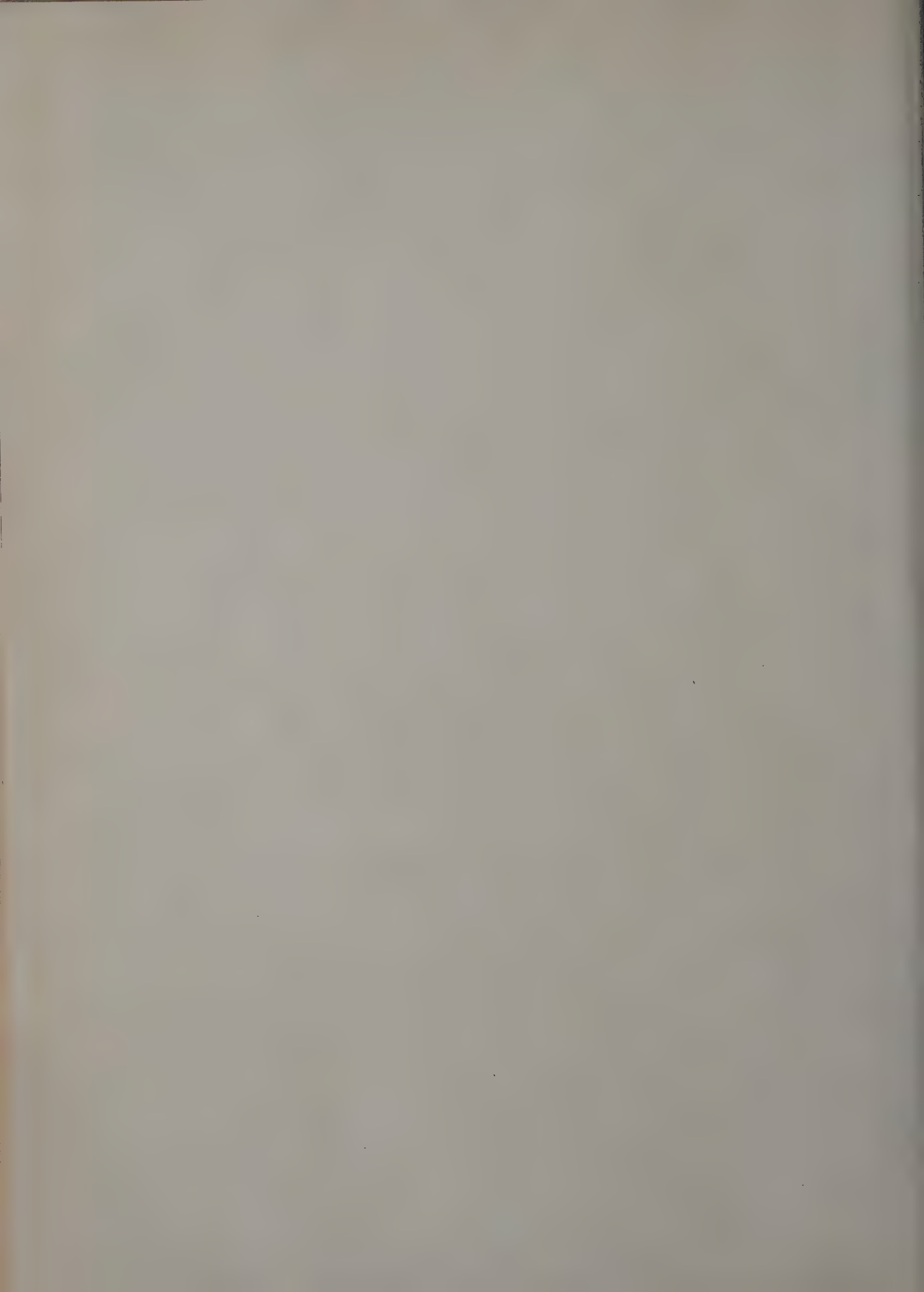
Index No.
D 22 b
WAR BUILDING

PENCIL POINTS DATA SHEETS PREPARED BY DON GRAF

Information herein is based on the Defense Housing Critical List, effective February 24, 1942, issued by the War Production Board. In general, use of copper and alloys is permitted only for current-carrying portions of the wiring system. Metallic coverings for conductors are prohibited except where absolutely required for safety; if possible, layout should be such that none will be needed. For example, armored cable is permitted for fishing in existing concealed spaces, but feeders from master service cabinets to other structures must be non-metallic sheathed cable. Fixtures, plates and wiring devices have to be non-metallic wherever possible. Private telephones are not allowed. Door bells and lock releases are permitted only for multi-family dwellings.

SET
22
JUL
1942

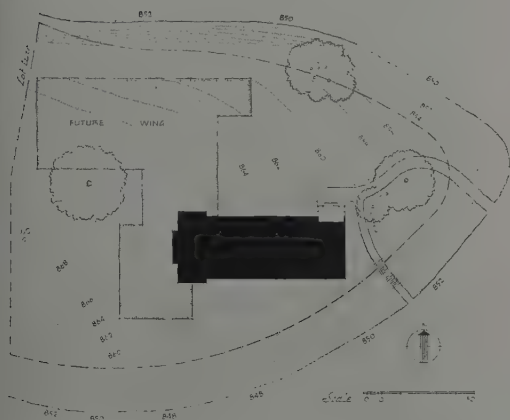




designed by PIETRO BELLUSCHI

of A. E. Doyle & Associate, Architects, Portland, Oregon

"An Architect's finished work speaks more forcibly and with less charity than his most ingeniously expressed theories. The tremendous impact of war may have changed what in our mind appeared to be a trend toward a more human architecture—almost toward a new romanticism—into an architecture whose aspects will be only of a social and economic order. It may be hoped that the two will eventually go hand in hand." **P.B.**



ST. THOMAS MORE CHAPEL, PORTLAND, OREGON



SINCE the death of A. E. Doyle in 1928, the firm he founded in 1905 has continued as a partnership of three men: W. H. Crowell, F.A.I.A., D. M. Jack, business manager, who were early associates of Mr. Doyle, and Pietro Belluschi, who has been chief designer since 1927. During this time, the design character of the work coming out of the office has changed decisively. Maintaining former standards of sound construction, a num-

ber of residences and institutional buildings have appeared in Portland and in the Oregon region, designed in the Doyle office, which are important and distinguished examples of modern architecture.

Chiefly responsible for this design quality is Pietro Belluschi, partner in the Doyle firm since 1933. Belluschi, born in Ancona, Italy, in 1899, received most of his education in Italy. He received his degree of Doctor of Architectural Engineering from the School of Application for Engineers in Rome in 1922, after completing the general courses at the University of Rome. He came to this country to study engineering at Cornell on an exchange fellowship, and, after graduating in Civil Engineering, decided to remain in America. He entered the Doyle firm in 1925, at the age of 26, where his abilities as a designer were quickly recognized. While in the West his natural artistic interests and talents were enlarged by further study and travel. Today, mature at 43, Belluschi is one of those rare architects with engineering training, who at the same time has a strongly developed artistic sensibility. Belluschi passionately loves **architecture as an art form**, as a part of his interest in all the plastic arts, and feels vividly the need for endowing material structures with the qualities of grace and imagination.

The money available and the particular purposes and uses of the building determine the starting point of the design process. From elementary functional considerations come the decisions made about space relationships and the materials to be employed. Beyond this there is a concern about subtler matters of expression—how to arrive at the form most satisfactorily revealing the meaning of the structure in terms of line, color, texture, shape.

The effect of simple directness achieved in a number of these recent buildings illustrates the meaning of **simplicity** as Belluschi conceives this important quality. It is a positive thing—a harmony of many elements richly unified—not the mere negative elimination of elements. Withal there is an impatience with the banal, and with lazy fuzziness of detail; in their place is a positive delight in clean lines and fresh smooth planes. Penetrations of one line or plane into others are frequently found in this work—contributing to the effect of tying-together, of organic simplicity.

Variety and masterly handling of materials are other qualities encountered in this recent work. In commercial and institutional buildings, frequent use is made of stone in large slabs (especially marble) for which Belluschi has retained the Italian's traditional fondness. Most of the residences show the designer's appreciation for the beauty of the woods available in such abundance in the Northwest region. Fir, spruce, birch,





and hemlock, left natural or simply treated with preservative, attain an often surprising elegance as finish materials for walls and ceilings. At the same time these wooden houses with their low sloping roofs come into satisfying harmony with the Oregon setting of tall trees and rolling hills. They weather and blend in color with the environment with the same charm as do the vernacular wooden barns of Oregon.

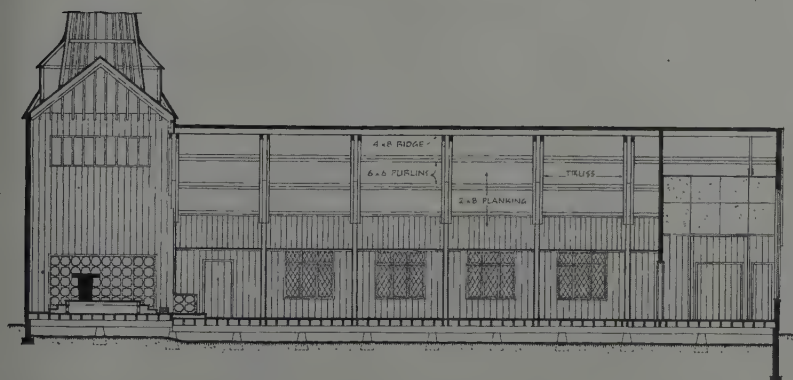
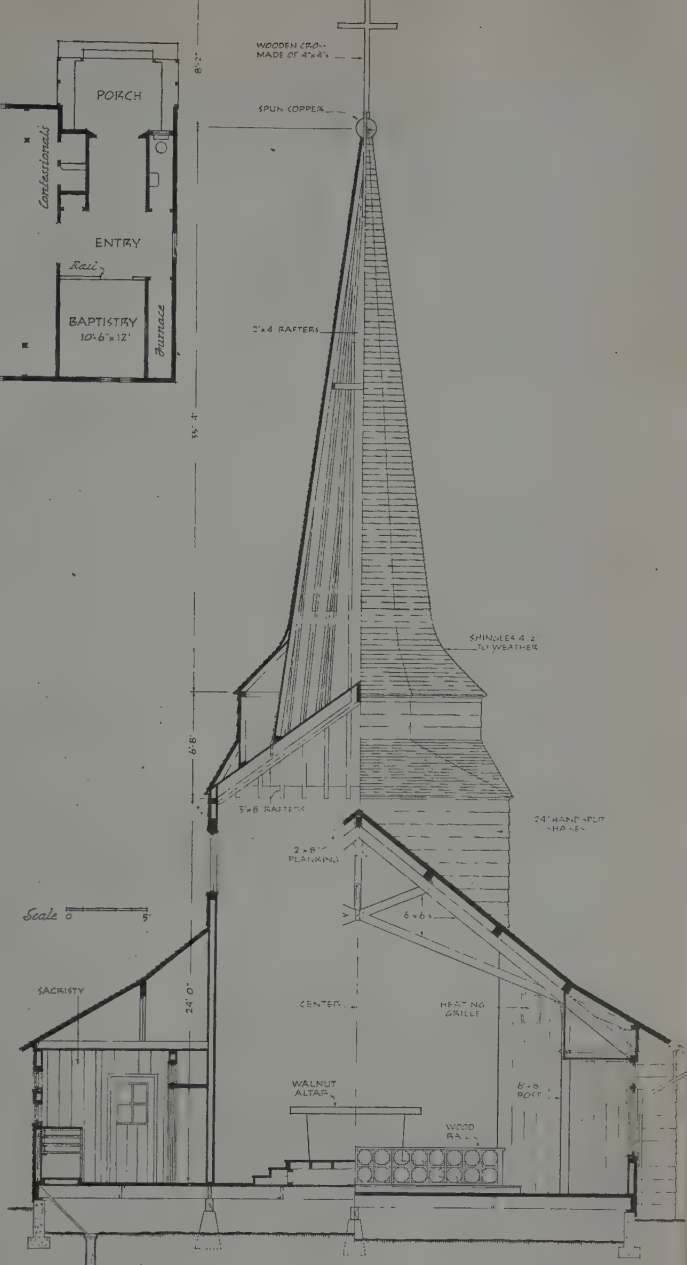
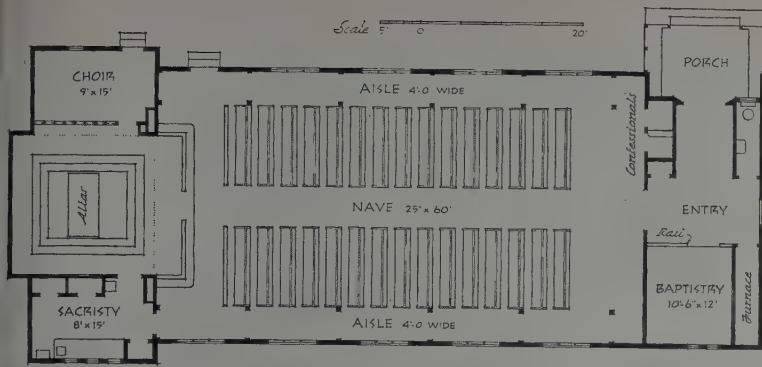
Only recently has the quality of this work begun to get considerable national recognition, but for the past several years it has been a source of stimulation for a new generation of young Northwest architects.

WALTER GORDON

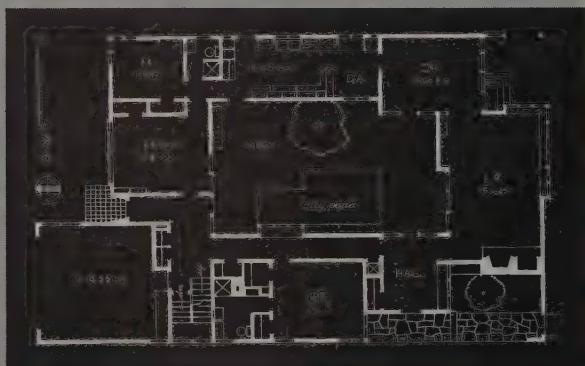




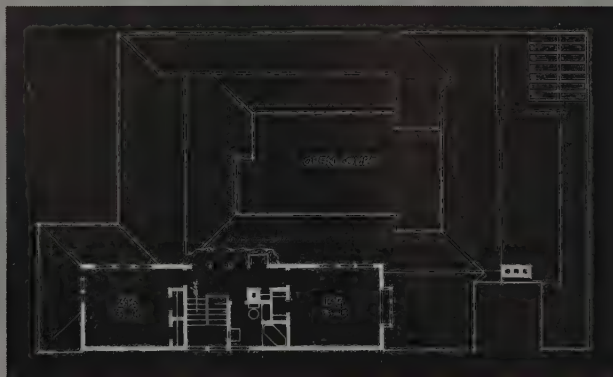
The ST. THOMAS MORE CHAPEL is an example of the economical and straightforward use of local materials, the handling of which is probably the outstanding characteristic of Belluschi's design ability. The sources of natural lighting were carefully studied to give dramatic emphasis to the SANCTUARY (above). All interior cedar walls were left unfinished. The rough knotty pine boards used on the exterior (see photographs on pages 60 and 61) were given one thin coat of pigmented lead and oil



MYERS HOUSE IN SEATTLE



In designing the Myers residence, Belluschi was faced with the problem of fitting a fairly large home in a 60-foot wide lot without destroying too many of the beautiful Madrona trees on the lot. (Photographs by Erven Jourdan)



The Myers house was designed around an open court and lily pond



From the Corner Porch (photograph below) there is a spectacular view of the far away Olympic Mountains and Puget Sound. The two photographs above show a detail of the gate and protected dooryard leading to the Entrance Hall

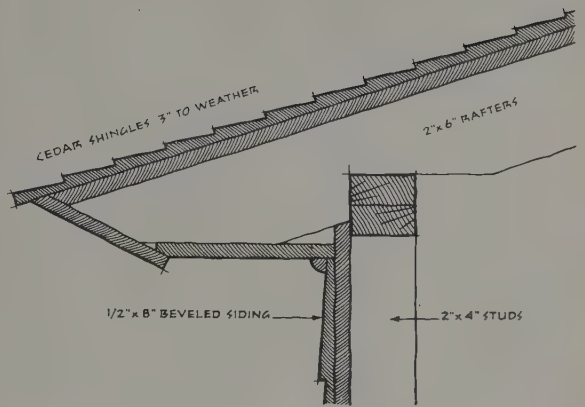




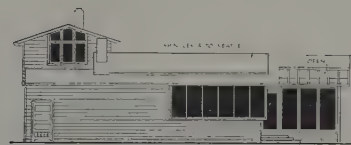
The COURT (photograph at left and below across-page) is sheltered from the ocean winds and is, in reality, an extension of the Living Room. Together with the Lily Pond, the court offers a peaceful relief from the dramatic view seen through the main window (see photograph on page 64)



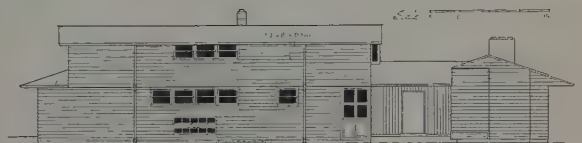
Belluschi's appreciation for the beauty of the woods available in such abundance in the Northwest region is reflected in the Myers house. Note his handling of the overhanging roof, and the basketweave pattern of the fence (at left). Wood is left natural or treated only with a preservative



CROSS SECTION AT ROOF OVERHANG



SOUTH ELEVATION

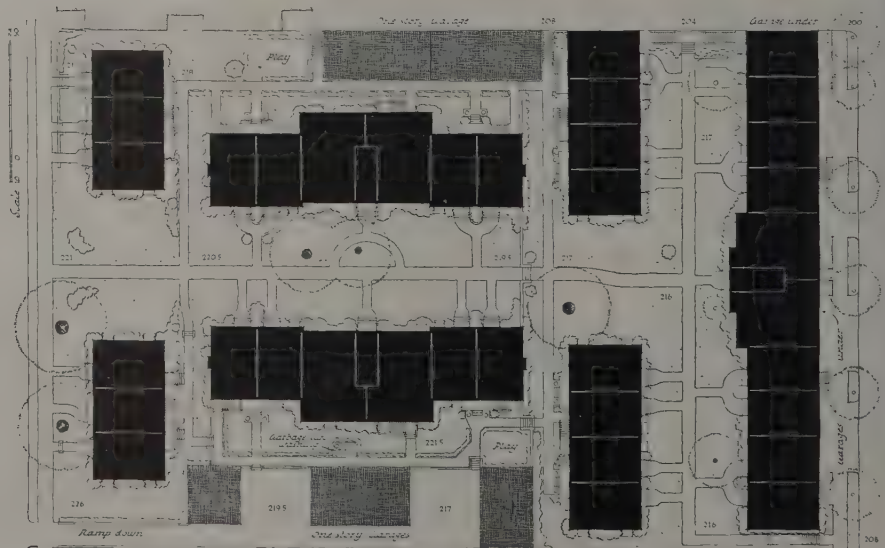


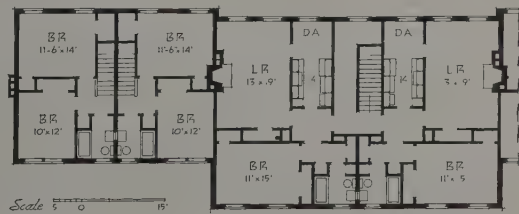
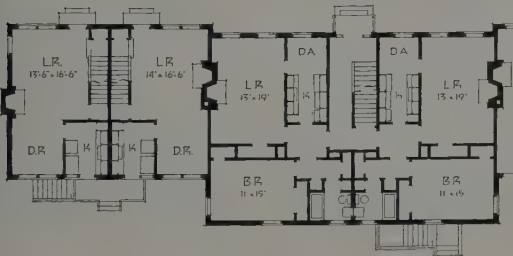
WEST ELEVATION



APARTMENT HOUSING

Principal design problem in the VISTA AVENUE HOUSING PROJECT (an FHA project) was the coordination of the endless rules and regulations promulgated and interpreted by different government agencies. The plans and layout were developed as a result of government suggestions. The exterior reflects the influence of Belluschi's subtle attention to matters of expression—how he arrived at the form most satisfactorily revealing the meaning of the structure in terms of line, color, texture, and shape. The owner was interested in having a development which would endure for the next several years and was willing to spend enough additional money to have a brick exterior. The “brick” used on the exterior is actually hollow tile, scored and broken into four pieces. Porch detail across-page. (Photographs by Erven Jourdan)



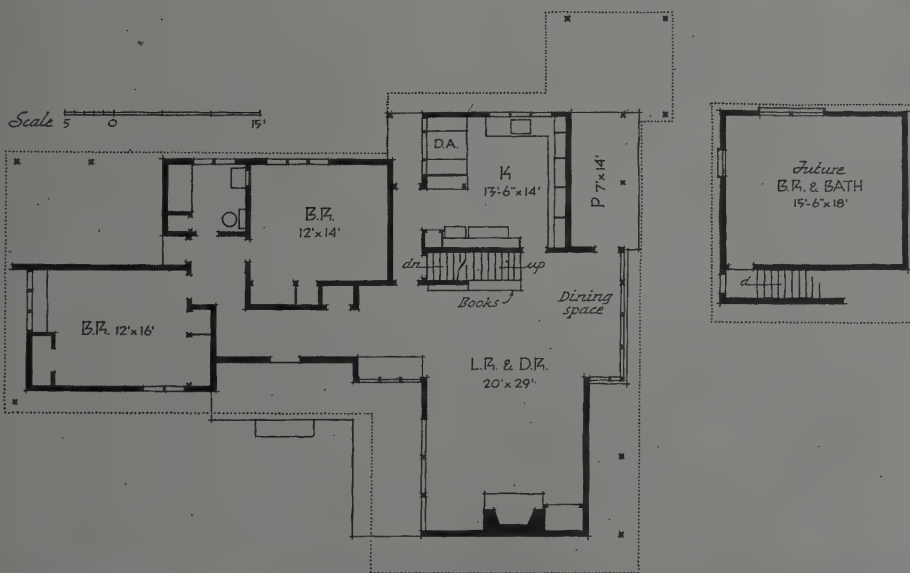
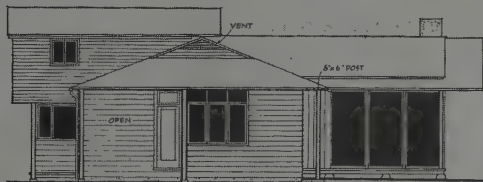
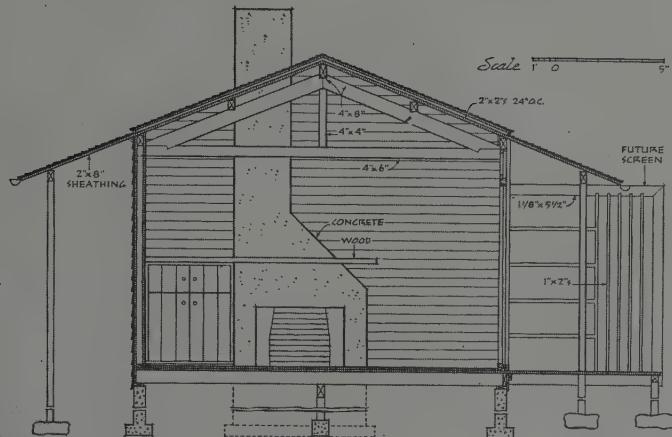




THE JOSS

The plan was determined by the owners' desire to enjoy to the fullest extent the views located in opposite directions—one, the great mountains to the north; the other, the beautiful valleys to the south. Belluschi made an interesting composition with an existing clump of large maple trees. The exterior walls were built



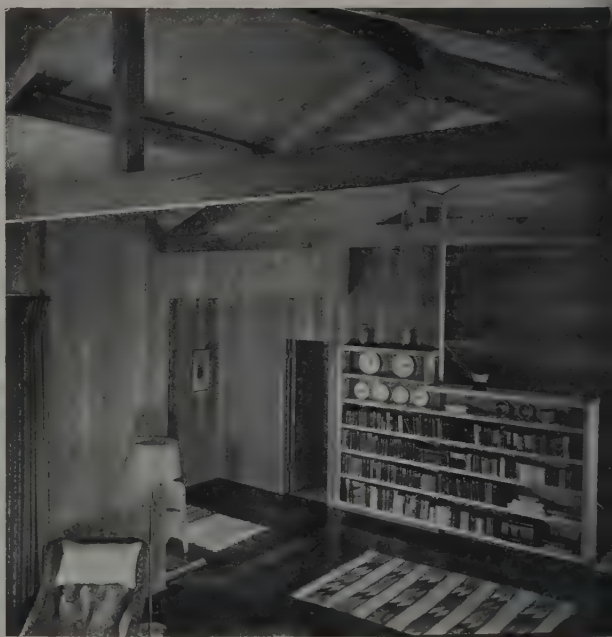


HOUSE

rough spruce siding to which
s applied one coat of a very
weak solution of iron chloride
and one coat of preservative

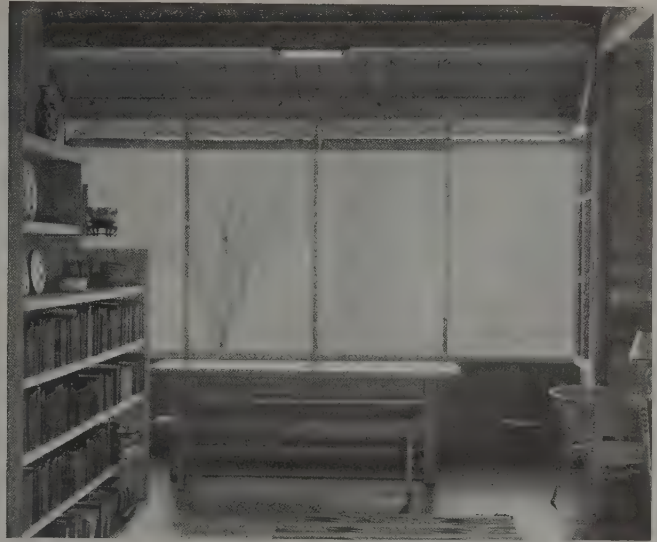
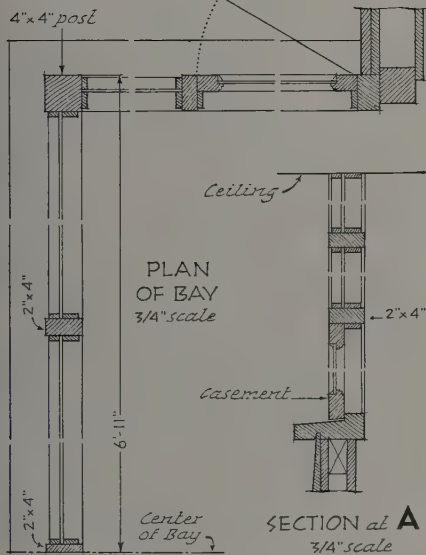
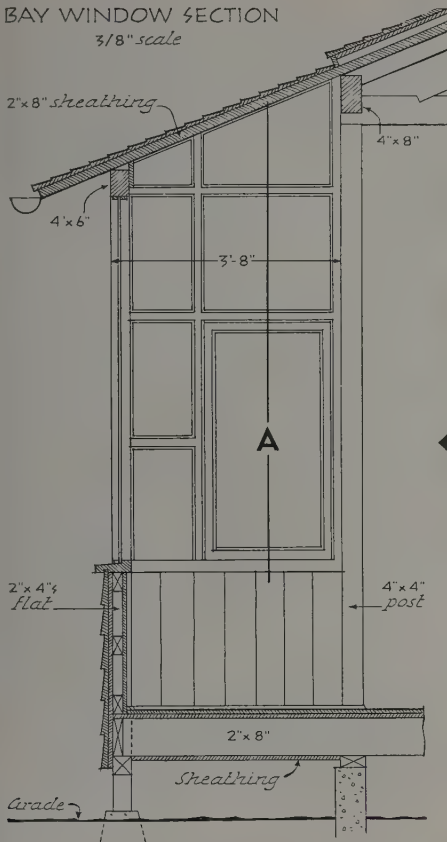


All of the interior materials in the JOSS RESIDENCE, including the white sand plaster in the Bed Rooms, the cedar walls in the Living Room (photographs on this page), and the hemlock ceiling were left unpainted or unfinished, with the exception of the Kitchen and Bath Room. (Photos by Erven Jourdan)

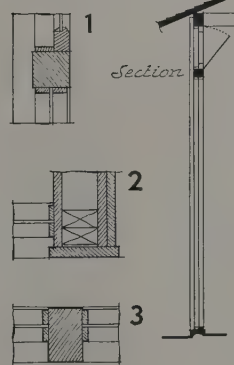


BAY WINDOW SECTION

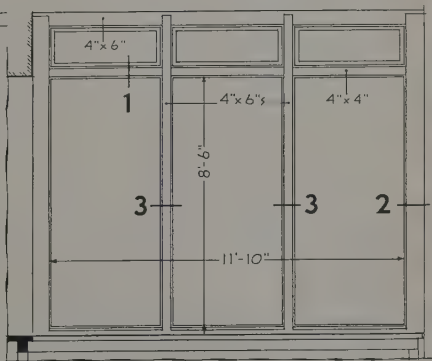
3/8" scale



DETAILS 3/4" scale



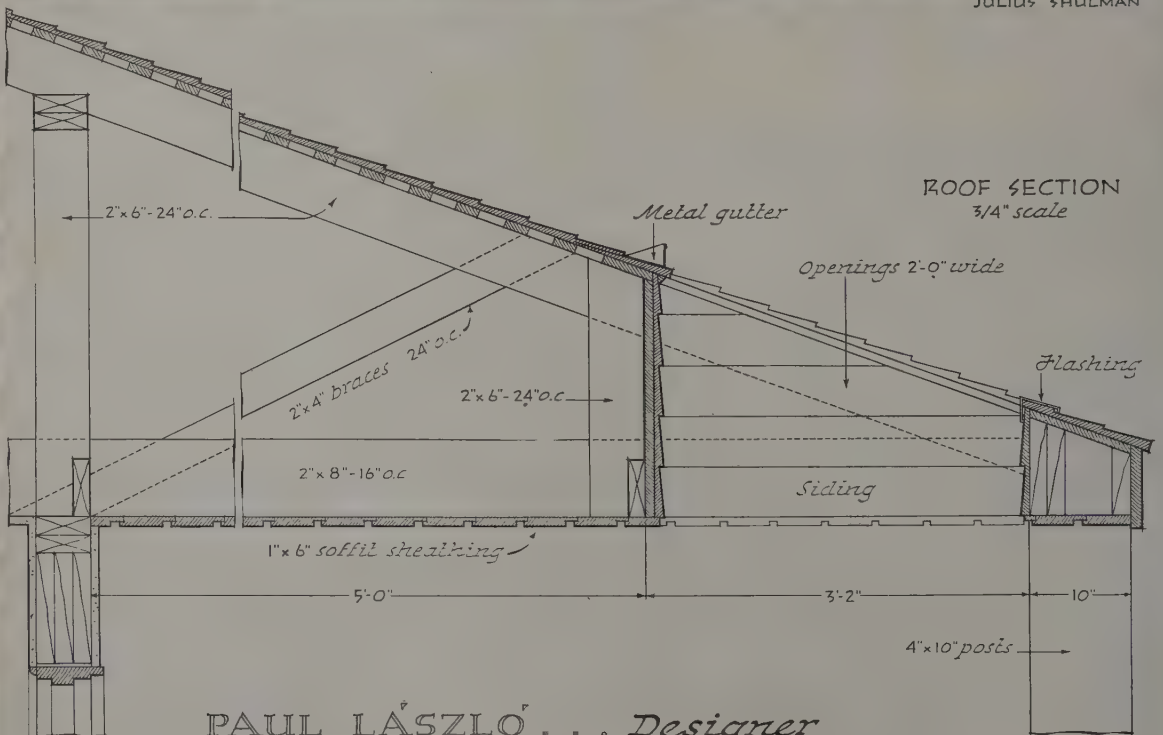
ELEVATION 3/16" scale



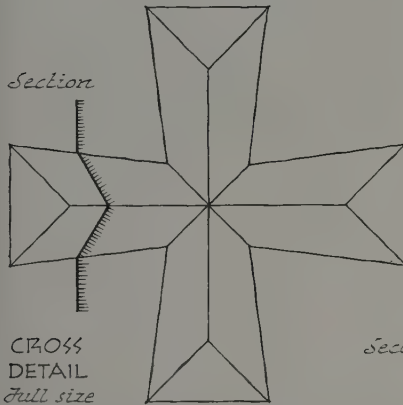
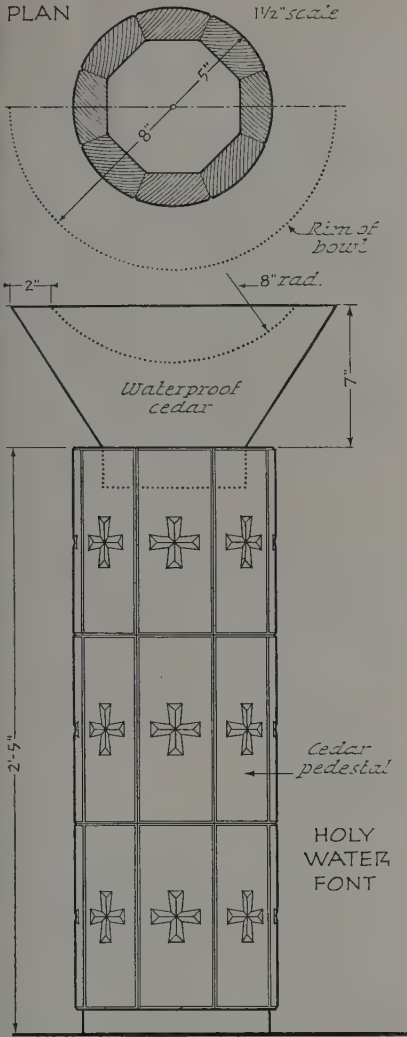
A. E. DOYLE & ASSOCIATE Architects



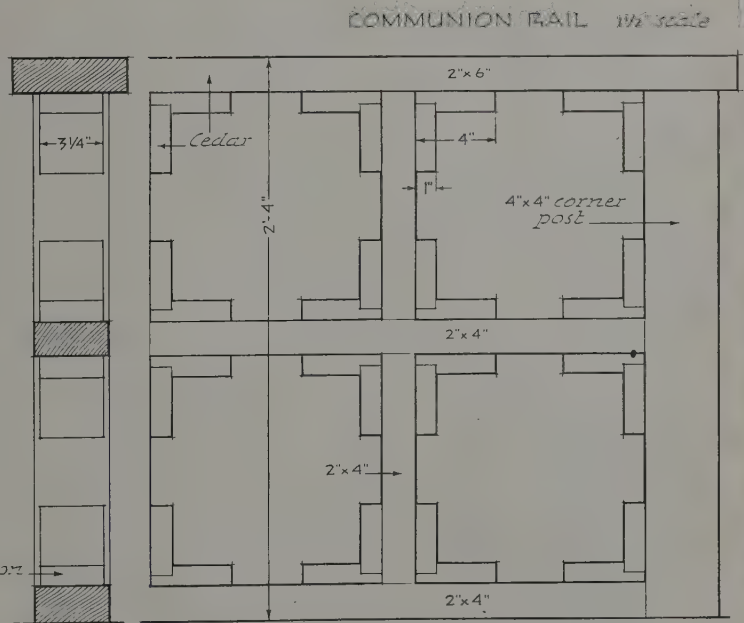
JULIUS SHULMAN



PAUL LÁSZLÓ... Designer

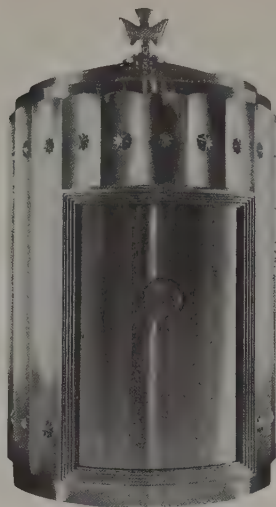


ERVEN JOURDAN



A. E. DOYLE & ASSOCIATE. Architects

SELECTED DETAILS



Tabernacle by Henry McGill, Architect. Executed by V. Pribil



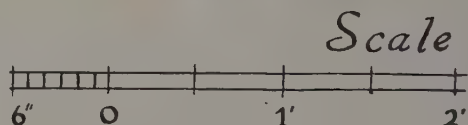
Tabernacle designed, executed by V. Pribil, New York Art Iron® Works



Tabernacle (detail of door at right) by the Iron Craftsmen, Philadelphia, for Henry D. Dagit & Sons, Architects



Tabernacle by Elliott Chisling, Architect. Executed by V. Pribil



FOR BETTER SIGHT: WHITE FACTORY FLOORS

By DON GRAF

ADAPTING American mass-production methods to airplane manufacture has introduced many problems. Among these, the difficulty of providing constant, high intensity, glareless light during continuous day-and-night operations has several ramifications. First, much work is done on vertical surfaces, and it has been ascertained that the average lighting system may not light vertical surfaces satisfactorily.

Second, work has to be done on the underside of assemblies, which are in constant shadow. Third, work is done at levels up to 18 feet or more, not at bench level only. Fourth, the objects worked on are often brilliantly reflective. Portable lights solve some difficulties, but also have drawbacks.

The conversion of aircraft factories after the war to other types of processes

will, in many cases, have identical requirements for underneath or vertical illumination.

THE FLOOR A REFLECTOR

Some recent bomber plants designed by the Austin Company† have all interior surfaces as white as possible—ceilings, walls, and floors. In large working areas the end-walls may be 2,000 feet away from a worker and the side-walls 150 feet away, but reflecting floor and working plane are everywhere the same distance apart. These help to reflect and diffuse light. In one which has been studied by competent lighting engi-

† Credit for this new technique is due not only to the manufacturers of the material but also to The Austin Company who pioneered its use.

neers, the general level of illumination provided by the fluorescent lighting system was designed for 36.5 footcandles (horizontal) in the white-floored assembly area. Their tests showed an average of 36.4 footcandles after lamps had burned more than 1500 hours. There was no significant variation at working levels up to 18 feet above the floor. Furthermore, the vertical light level was 20.5 footcandles—a high average.

In another portion of the same plant, where the only difference in design was use of a gray cement floor, the horizontal level was 36.2 footcandles—almost the designed quantity—but vertical footcandles were reduced to 17.4. To quote the engineers. "The extremely high vertical illumination level in the assembly section is

Section of the white-cement-floored assembly line of a huge new bomber plant. Note the absence of portable lighting equipment; elimination of most shadows; high-level, diffused lighting



In this bomber plant, neat white cement was rubbed into the surface. Because of the diffused lighting, specular reflection from such units as the highly polished wing in the foreground is reduced

partially due to the white cement used on the floor. The reflection factor of this cement . . . is 44 percent." In another part of their report, they state that the gray floor factor is 27.4.

These figures, attained under practical working conditions, are somewhat lower than laboratory test results found by C. W. Muhlenbruch at Carnegie Institute of Technology.* Here, however, there was laboratory control of mixing, placing and finishing the material, and of the tests. Professor Muhlenbruch's tests were made in connection with the use of white cement curbs for highways; but certain conclusions which he reached seem important.

PROPORTIONS AND FINISH

In the first white-floored aircraft plants, neat white cement was merely rubbed into the slab surface before the concrete had set. In more recent examples, a $\frac{3}{8}$ -inch surface of 1:2½ white cement and white silica sand, plus a hardener, was bonded to the slab by placing the topping before the base course had taken final set, but when it was hard enough to walk on with-

*"Progress Report on Reflectivity of White Portland Cement Concretes," by C. W. Muhlenbruch, Carnegie Institute of Technology; "Concrete," Jan. 1942. Also data presented to the American Society for Testing Materials, June, 1942.



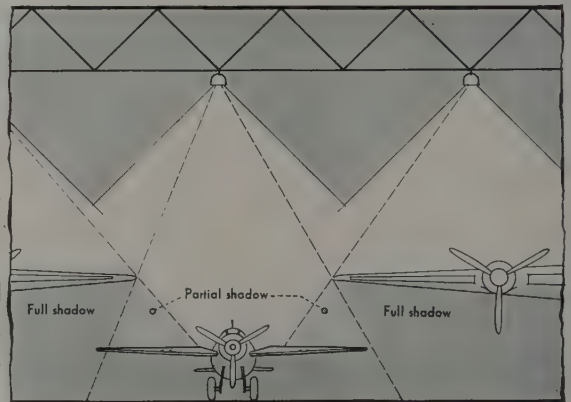
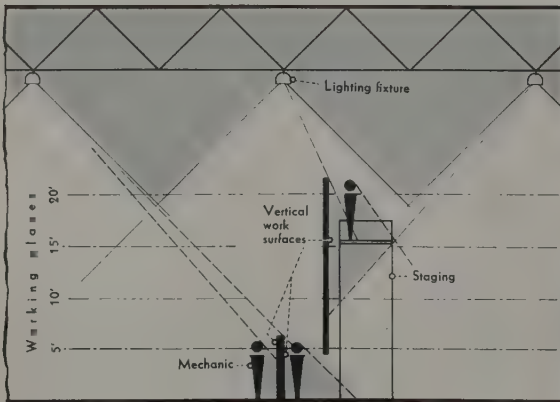
out showing appreciable marks. Mortar was deposited from wheelbarrows, spread by hand shovels, and struck off with a wood templet. After initial set, the surface was machine-troweled and finished with celluloid trowels.

The surface was immediately sprayed with two coats of 1:4 sodium-silicate water solution, low in calcium to prevent staining. During curing, the floor is protected with weatherproof paper, sealed at the laps with non-

staining latex cement, and covered with 1 inch of clean dry sand. These were removed when construction was complete, and the surface was swept and machine-polished.

This procedure bears out in practice the most important conclusions derived from the Carnegie tests. As they affect floor construction, these were: 1, Water-cement ratio influences reflectivity; 7 to 7½ gal. per sack of white cement produces the "whitest" con-

Diagrams indicate the way workmen's bodies and the objects on which they work cast shadows which interfere with production. This is true to some extent no matter what the type and location of lighting fixtures. White cement floors help to reduce shadows by reflecting light upward





crete. 2, White sand produces concrete averaging 12 per cent higher reflectivity than river (light brown) sand (but concrete tested contained coarse aggregate as well as sand). 3, Trowel finishing raises reflectivity 20 per cent on the average. 4, Moist-curing reduces reflectivity from 10 to 20 per cent. 5, Adding dispersing agents seems to have little value although by increasing workability they might be expected to increase reflectivity.

It is possible, also, that the slightly increased reflectivity attained by using white sand might be offset by high local cost of white sand. Most important is use of clean sand, free from matter which might discolor the concrete. Professor Muhlenbruch believes, with cements available today, there is little possibility of producing objectionable glare unless the floor is kept ground and highly polished.

(Continued on page 80)

A portion of a mechanized sub-assembly line demonstrates need for glareless, high-intensity illumination. Top, bottom, and vertical surfaces are worked on. Skilled hand labor can compensate for poor lighting; but for mass production, with high labor turnover and less dependable labor due to lack of time for training, near-perfect lighting is absolutely essential if hand-produced results are to be equalled at low cost

FOOTCANDLES OF ILLUMINATION IN A TYPICAL PLANT

Measured at 3 ft. above floor¹

CONDITION	Downward Illumi- nation	Upward Illumi- nation
Design requirements	35	10 mated)
Results:		
white cement floor, new..	45	12
gray cement floor, new..	40	8
white cement floor, after use ²	37	10
gray cement floor, after use	31	6
white cement floor, under airplane wing 12 feet high, 10 feet wide	15	7

¹—Light source 40 ft. above floor

²—Reduction for floors in use is apparently partly due to loss of efficiency at the source of light. Data from Portland Cement Association and Frank Clayton, Plant Engineer

REFLECTIVITY OF WHITE AND GRAY CEMENT FLOORS

(% of original light reflected)

I—PRACTICAL EXPERIENCE (actual installations)

White cement and white silica sand..44%
Gray Portland cement concrete.....27.4%

II—LABORATORY TESTS (Carnegie Institute of Technology)¹

Neat white cement82%
White cement sprinkled on gray
concrete78%
White cement concrete, white sand..70-73%
White cement concrete, light brown
sand62-65%
Gray Portland cement, white sand....33%
Gray Portland cement, light brown
sand20%

¹—C. W. Muhlenbruch

(Continued from page 79)

USE, MAINTENANCE, AND COSTS

Assembly lines, where operations are complex—involving work on vertical surfaces and bottoms of objects—and yet “clean,” can benefit greatly from use of white cement floors. In stock aisles, where bin faces are vertical and consequently vertical illumination is important, white cement floors would seem logical. All six inside surfaces of motor test cells, in which aviation motors are operated on test blocks while inspectors watch through ports, might well be as highly light-reflective as possible; the problem here is to illuminate evenly every part of the motor being tested. White cement floors have also been used for areas where precision tooling is done.

Ease of seeing is improved in many operations because the white floor provides a better background against which the visual task is performed. Dropped tools are more easily found on a white floor than on a darker floor.

Where “dirty” operations such as motor repair are carried on, white floors are of course not advisable. But the principle of the white cement floor remains applicable to many kinds of plants, for many “clean” operations.

Specific figures on maintenance costs are not available. Floors are swept daily, mopped weekly, scrubbed monthly. Staining from tobacco juice, a problem at first, has been “controlled by more liberal and judicious use of spittoons.” Stains may also be caused by improper type or use of curing paper; and stains from truck tires

seem to burn into the surface and are difficult to remove with present methods. Maintenance is not difficult, and one plant superintendent claims the white cement floors are easier to keep in a sanitary condition than darker floors. If the increase amounted to even $\frac{1}{2}$ cent* per square foot per year—a generous figure—maintenance cost has little significance in relation to total savings.

These savings are in lighting fixtures, equipment, installation charges and electric current costs necessary to gain comparable lighting levels without white cement floors. In one aircraft plant it was calculated that white cement floors saved a connected electrical load of 277 kw, with a large decrease in the number of fixtures required as well as a very substantial reduction in the air conditioning installation and its maintenance—not to mention the saving on extension cords and outlets for portable working lights. Also to be considered is increased plant capacity due to a decrease in poor workmanship, rejections, etc. The savings alone are sufficient to offset in a year or less any greater cement costs involved in white floors. U. S. Army Engineers state that white cement floors, installed as an integral topping, cost 5 cents per square foot more than gray cement floors installed in the same plant at the same time. This includes cost of the floor hardener used on the gray cement; but exactly how much of the cost of paper and sand protection is included is not certain.

*Maintenance and cost data courtesy Portland Cement Association.



Above, light meter readings taken on adjoining areas of white and gray cement showed that the white floor reflected 44 per cent of the overhead light, the gray floor 27.4 percent. Below, workmen stripping the sand and paper protective layer from the white floor when construction of the plant was complete





ST. CLEMENT DANES...

All that remains of St. Clement Danes since Nazi bombers sang their hymn of hate over London is its graceful, breath-taking spire. This familiar landmark, designed by Sir Christopher Wren, following the great fire of London in 1666, was one of the finest of the fifty churches he designed. It paid highest tribute to the great architect's genius for invention and decoration. Here Samuel Chamberlain reconstructs with his Typhonite Eldorado St. Clement Danes as it was known for nearly three centuries. Another in a series brought to you by Pencil Sales Department, Dept. 167-J7, JOSEPH DIXON CRUCIBLE COMPANY, JERSEY CITY, NEW JERSEY.

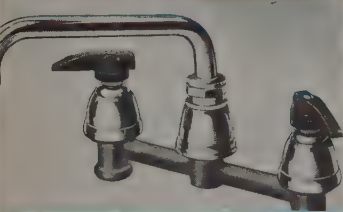
TECHNIQUE USED

...well-sharpened 3B Typhonite Eldorado was used in drawing the spire of St. Clement Danes. Shading and values were blocked in with the flat surface of B and F degrees. The background building was blocked in with flattened H and 2H pencils, the fleche with an HB.



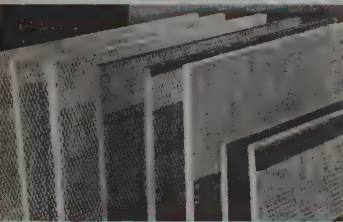
STOCK WINDOW
sans **CRITICAL MA-**
TERIALS. Andersen
Corporation, Bay-
port, Minn.

A standard double-hung window with the critical materials reduced to less than $\frac{1}{2}$ pound. Pulley wheels are self-lubricating lignum-vitae with heat treated glass axles mounted in a practically draft-proof wood housing. Sash weight is iron ore concrete, accurately weighted. A pressure strip, forming part of the sash style of the window, is arranged to exert a constant pressure against the stops to effectively check air leakage and prevent rattling, yet permits easy sash operation. Other features include no exposed end wood, bed-puttied glazing, locked sills.



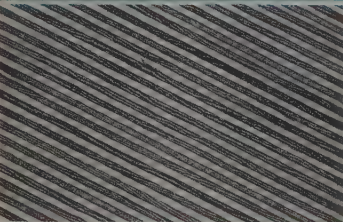
PRACTICALLY
BRASSLESS PLUMB-
ING FITTINGS. The
Schaible Foundry &
Brass Works, 1086
Summer Street, Cin-
cinnati.

The swing spout faucet shown represents a 92.3% brass saving over the peacetime model. No brass at all is used in this company's various sink strainers, traps and connecting wastes. In de-brassing these fittings various coatings on ferrous metal take the place of the critical material which has been normally utilized. The manufacturers do not represent this new line as equal in every respect to the brass goods, yet they give assurance that it is good-looking, rugged and absolutely serviceable. The government has ordered large quantities of several items in the line.



BLAST CUSHIONING
BLACKOUT MATE-
RIAL. Owens-Corning
Fiberglas Corp., To-
ledo, O.

Known as Fiberglas OC-9 Board, this new material is composed of fine, resilient glass fibers compressed and treated with a binder which gives it sufficient rigidity to serve as a self-supporting, fire-resistant material. The manufacturer does not claim protection against nearby blasts but says it may prove of definite value in absorbing part of the concussion caused by explosions. The material provides for heat loss reduction and sound absorption which are both important in the war economy in increased production because of lessened worker fatigue.



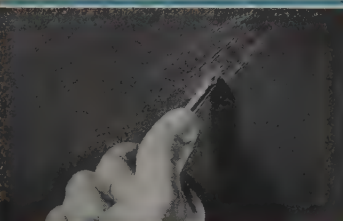
61-PLY DOUGLAS
FIR PANEL. Bakelite
Corporation, 30 East
42nd Street, New
York.

Indicative of developments in resin-bonded plywood is this 61-ply panel bonded with Bakelite liquid phenol resin by high frequency electrical heating. The ancient Egyptians discovered the use of veneer woods which have now reached their highest development in the panels shown in the illustration. The importance of the adhesive comes from the fact that plywood is no stronger than the bonding agent. This is where synthetic resins excel as adhesives for plywood. New techniques of treating and bonding plywood are being found each week.



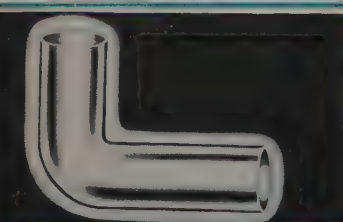
PLASTIC FLOOR
TILE IN COLORS.
The Tile-Tex Com-
pany, Chicago
Heights, Illinois.

Known as Flexachrome, this tile is in no sense an asphalt or rubber tile, but a unique composition of asbestos fiber, pigment, and plastic binders. The manufacturer says that Flexachrome combines grease-proofness with high resistance to acids and alkalis and may be installed safely below grade on wood or concrete sub-floors. Tile sizes range from 3 x 3 up to 18 x 24 in $\frac{1}{8}$ " thickness. Installation is by the manufacturer's approved contractors. Fifteen solid colors in a wide range of hues as well as 18 marbled colors are standard.



APPLIED LIQUID
HARDENER FOR
CONCRETE AND
TERRAZZO. L. Son-
neborn Sons, Inc., 88
Lexington Avenue,
New York.

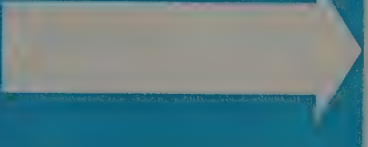
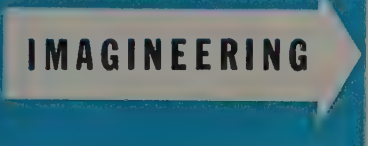
Lapidolith Liquid is well known in the architectural profession and the need for this hardener has been determined thousands of times by the simple scratch test shown in the illustration. A new 6-page folder has just been issued by the manufacturer, containing 4 standard specifications for the application of the hardener to concrete and terrazzo. The folder gives tests and informative data on the treatment for hardness, dust-proofness, permeability, penetration, protection against oils, to confirm the company's experience in treating millions of square feet of concrete.



FLUSH ELL IN
TOUGH PLASTIC.
American Molded
Products Co., 1753
North Honore St.,
Chicago.

An acute need is met by the new, molded plastic, flush elbow for connecting the tank to water closets, shown in the illustration. This ell not only fulfills all the requirements for hard and constant use but also provides lightness with other advantages. It is leak-proof, impervious to water, iron, lime, sulphur, brine. It is absolutely non-corrosive, non-electrolytic, and lasts indefinitely. It doesn't break, crack, or dent in the usual packing or handling with tools. The composition is homogeneous with a smooth enamel-like finish inside and out.

THREE OFFERS AND A PROPOSAL



FIRST OFFER: If you operate *any kind* of equipment made of aluminum and you are baffled in any way in maintaining it in top condition—give us the facts, and we will rush you our recommendations.



SECOND OFFER: If you are making anything whatsoever out of aluminum, and are stumped in any way in setting up the best methods of fabricating it—give us the facts, and we will see that you get all the know-how in our power.



THIRD OFFER: If you have joined the host of those who believe that industry must even now be planning the new products that will make jobs when this thing is finally over; if you are letting your imagination soar: Won't you ask us to help you engineer it down to earth with all the up-to-date facts about Alcoa Aluminum, plus some of the very practical dreams we have been dreaming?

AND THE PROPOSAL: Do some personal Imagineering, right now, for the sake of your own personal tomorrow.

We have been talking Imagineering for some months largely in terms of the future. And in terms of industry. But here is the personal slant:



Thirty billion dollars is loose in the country. It is the gap between what is available for spending and what is available for personal purchases. Each of us has a sliver of that chunk of excess purchasing power.

If we put it into War Bonds, we are told that it will both finance the war, and avoid inflation. We sometimes forget that it will also finance ourselves, as users of goods, to buy the new products we are all readying, as makers of goods. Buying tomorrow, today, is patriotism and sense—business sense.

Aluminum Company of America, 2198 Gulf Bldg., Pittsburgh, Pa.

ALCOA ALUMINUM



(Continued from page 82)

NON-PRIORITY FLASHING.
Wasco Flashing Co., 86
Broadway, Cambridge, Mass.

Characteristics: Wasco Fabric-Flashing consists of a felt core bonded



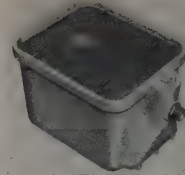
on both sides to an asphalt-saturated fabric by means of a ductile mastic. The flashing requires no priorities. **Installation:** Flexible enough so that it can be formed by hand on the job. Shipped in rolls 24 feet long, 36 inches wide. **Literature:** 4-page folder (A.I.A. File No. 12-H) illustrates and describes its functions, use, and applications.

SLOTTED MOLDING FOR CURTAIN TRAVERSES. Jiffy Join, Inc., 203 E. 18th St., New York.

Function: Designed for use where ceiling or curtain traverses are specified. This slotted wood molding has a patented slide curtain-hanging feature that eliminates the need for metal curtain rods and fixtures. The illustration shows, left to right: double-slot molding, triple-slot traverse, double-slot molding, single-slot molding. The slider tape, for sewing to the top of curtains, is shown being inserted into slot through a small aperture near the end of the molding. The curtain hanging device is a woven cotton tape set at intervals with Jiffy sliders. **Characteristics:** Kiln-dried and processed medium-hard woods. Available in 4, 6, 8 feet, and other standard lengths. Curtain tape may be ordered in any desired footage. **Installation:** Moldings come with either squared or beveled sides for attaching to the surface, or recessing into plaster.

CAST IRON INTERCEPTORS CONVERTED TO CERAMIC CONSTRUCTION. J. A. Zurn Mfg. Co., Erie, Pa.

To conserve metal for war production use, Zurn has developed a vitreous

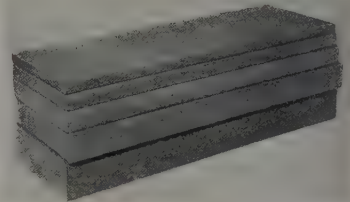


glazed earthenware grease trap to replace the former cast iron unit. The new V.G.E. (vitreous glazed earthenware) Grease-trap is said to

be better than 90 percent efficient at rated capacity of 25 G.P.M. The only metal used is for cover clamps and pipe connections.

INSULATION FOR COLD STORAGE ROOMS. Armstrong Cork Co., Building Materials Division, Lancaster, Pa.

Function: Mineral wool, board type insulation for cold storage rooms and



equipment. Made of non-priority material. It equals or exceeds Federal (Continued on page 86)



Expanded Metal Meshes for Safety-Speed-Economy

Expanded Metal PARTITIONS and ENCLOSURES Simplify Plant Layouts

◆ Strength, protection, safety, visibility, ventilation, sanitation, space economy, quick installation, low cost, and high salvage value—those *ten* advantages tell the full story of Steelcrete *Safe-T-Mesh*, and its outstanding adaptability to every style of Partition and Enclosure. And that's why Steelcrete assemblies have been installed in so many of the most important defense projects. Specifications on the *complete* Steelcrete line, together with drafting room standards, are presented in our new 100 page Hand Book P-7. Write for it on your *Office Stationery*. See Drawing Room Standards DS-22A and DS-23A for Construction Details on New Type Partitions and Enclosures.

OTHER Steelcrete Products for Plant Layouts

EXPANDED METAL GUARDS for Men and Machines
EXPANDED METAL GUARDS for Windows and Doors
EXPANDED METAL MESH for Conveyors, etc.
EXPANDED METAL WALKWAY MESH for Catwalks, etc.



THE Consolidated

EXPANDED METAL CO'S, WHEELING, W. VA.

IN THEY GO... AND IN THEY STAY

Trapped in a
ceiling of
Cushiontone



THE DEMONS OF DIN haunt every building—lowering efficiency and endangering health—*unless* quiet is assured by efficient acoustical treatment. Installing ceilings of Armstrong's Cushiontone is the modern way to give all kinds of buildings the peace and quiet they deserve. It's the *easy, economical* solution to noise problems.

In every square foot of Armstrong's Cushiontone there are nearly 500 sound-absorbing perforations which provide a noise-reduction coefficient as high as 70%. Thus the cost of a Cushiontone ceiling is quickly paid for in terms of better working conditions, fewer errors, and reduced absenteeism.

Armstrong's Cushiontone is also a *practical* material. It's easy to clean and to keep clean. It can even be repainted, when necessary, without harming its acoustical efficiency. Room illumination is improved because Cushiontone's attractive ivory-colored surface has the superior light-reflecting factor of 73%.

An excellent insulating material, Armstrong's Cushiontone helps to keep rooms at healthful, even temperatures winter and summer. Fuel costs are reduced—another feature your clients will appreciate.

Get all the facts about efficient, low-cost Armstrong's Cushiontone. See *Sweet's* . . . or write for free sample and complete information. Armstrong Cork Company, Building Materials Div., 1227 State St., Lancaster, Pa.



Armstrong's Cushiontone

MADE BY THE MAKERS OF ARMSTRONG'S CORKOUSTIC

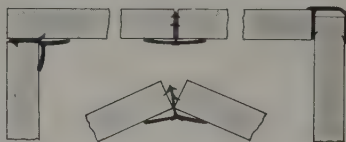


(Continued from page 84)

Specification HHM-371 for board or block form insulation, has a thermal conductivity ranging from 0.31 to 0.33 at 90°F. **Application:** Material is self supporting, will stay in place permanently without sagging, settling, shrinking, swelling, or warping. Free from objectionable odor and from liability to rot, mold, or harbor vermin. **Characteristics:** Material has moisture resistance, comes in 12 x 36" board size, in thicknesses of 1", 1½", 2", 3", and 4". Erection in hot asphalt with multiple layer construction is recommended.

PLASTIC WALLBOARD SHAPES. Extruded Plastics, Inc., Norwalk, Conn.

Function: Extruded Tenite shapes designed to cover unsightly seams and



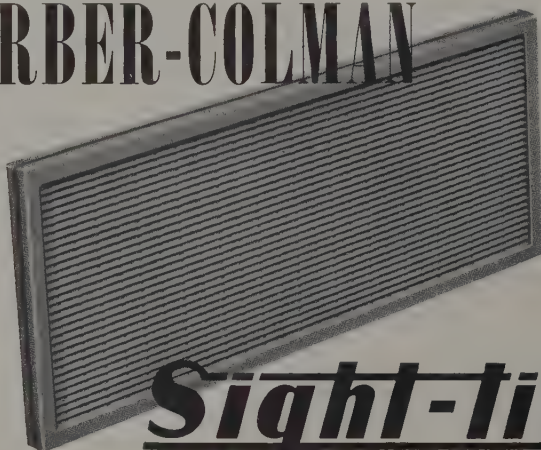
joints. **Installation:** No nails, adhesives, or other means of attachment

necessary. Resilient shatter-proof strips become automatically secured when forced into the seams. Strips are provided for inside corners, outside corners, flat panels, and 130° panels. **Characteristics:** Smooth, lustrous surface, eliminates need for paint or lacquer finishes. Shapes are stocked in red only at present, in 12-foot lengths. Other colors on special order.

VICTORY SASH uses wood. **Albert Kahn Associated Architects and Engineers, Inc., Detroit, Mich.**

With the government's restriction of the use of steel, a new type of wood

BARBER-COLMAN



CROSS-SECTION

Sight-tite

VENTILATING GRILLES

"VENTILATION WITHOUT VISION"



FROM ABOVE
You can't see
through it

FROM STRAIGHT ON
You can't see
through it . . .

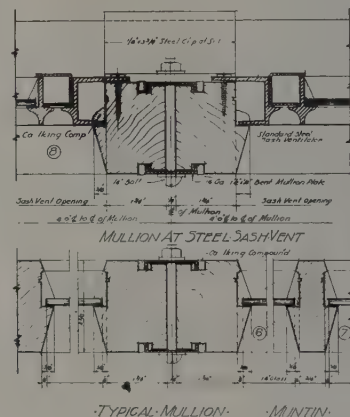
FROM BELOW
You can't see
through it . . .

IT'S
SIGHT-
TIGHT

THE core of the Barber-Colman SIGHT-TITE Ventilating Grille consists of overlapping fixed louvers of an inverted-vee shape. It is not possible to see through this grille from any angle, yet adequate flow of ventilating air is assured. The louvers are smoothly curved to offer minimum resistance to air flow. The construction is rattle proof, rigid, and strong, and will withstand severe abuse. These grilles are usually furnished, to specified dimensions, with a simple frame as shown, to be fastened in place by screws, bolts, clamps, or welding. Many have been used as transition grilles in doors. Two units, placed face to face, will effectively block the passage of light, thus providing an efficient light-tight ventilator. Write us, or see your Barber-Colman representative, for further particulars.



BARBER-COLMAN COMPANY
1230 ROCK ST., ROCKFORD, ILLINOIS



sash has been developed by John Schurman, of the Albert Kahn staff. To help the war effort, Kahn and Schurman are waiving patent rights, and will send blueprints to anyone who is interested.

Only two mullion supporting members, each approximately 2" x 2", are used. This holds the glass. Each unit is built complete in the mill and shipped to the job, where it is erected between head and sill. As the units are erected, the mullions are joined by a coverplate of light pressed metal with an intervening space for expansion and contraction. Calking compound furnishes weatherproofing. At the sills, the sash is secured by metal clips clamped only at the mullions with regular mullion bolts. A raised lug on the inside of the mullion and muntin provides a "footing" for a definite thickness of putty. A steel ventilator, designed for use in wood sash, is provided, complete with hinges, pivots, push bar, slides, chain pull. It can be adapted to gang, hand, or motor operation.

The sash is of sufficient thickness to accommodate doors, with mullions serving as the jambs. Each door unit replaces a sash unit. The door and sash can be readily interchanged.

Give your clients **MORE MILEAGE** from their floors



... WITH ARMSTRONG'S LONG-WEARING ASPHALT TILE!

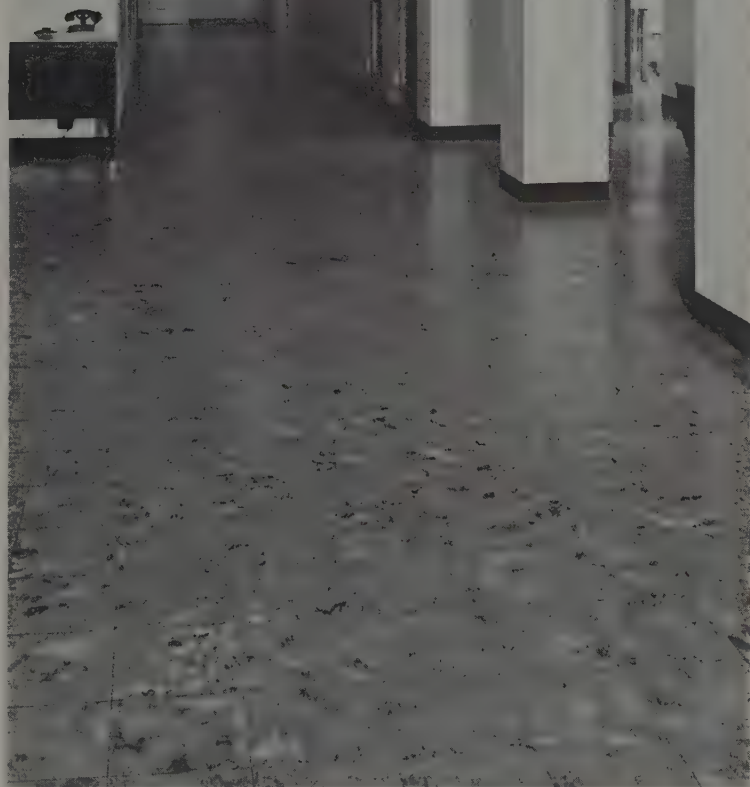
Floors that go a long way in life are floors of Armstrong's Asphalt Tile. It's not surprising! This efficient resilient tile flooring material is built for *staying power*... built to withstand punishment from stamping, scuffing feet, year after year!

In the heaviest traffic areas—in hospital corridors, offices, busy store interiors—Armstrong's Asphalt Tile has clearly demonstrated that it can take punishment without losing its fresh, colorful beauty. It can be used with safety on concrete subfloors in direct contact with the ground... because it isn't affected by moisture and alkali!

Yet, it costs surprisingly little to get the kind of functional durability that Armstrong's Asphalt Tile provides. In spite of the "luxury look" of this flooring material, its first cost is moderate. And maintenance is easy and inexpensive, too!

The decorative possibilities of Armstrong's Asphalt Tile are almost unlimited. A wide selection of plain or marble colorings is available in varied sizes and shapes. Moreover, these floors are hand-set, a tile at a time. That's why it's so easy to create the distinctive interior effects that clients demand today!

Make a point to get all the facts about Armstrong's Asphalt Tile. Consult "Sweet's"... or write for free illustrated booklet: "Low-Cost Floors with a Luxury Look." Armstrong Cork Company, Building Materials Division, 1206 State Street, Lancaster, Pennsylvania.



On 24-hour duty, 365 days a year... yet this floor of Armstrong's Asphalt Tile is just as bright and attractive as the day it was installed in the Cedars of Lebanon Hospital, Los Angeles. Field is Tan Marble No. 325 with a border of Slate Gray Marble No. 345. Installed by the L. D. Reeder Co.

ARMSTRONG'S ASPHALT TILE

The low-cost floor  *with the luxury look*

MADE BY THE MAKERS OF ARMSTRONG'S LINOLEUM

MANUFACTURERS' LITERATURE

Pine Paneling. Twelve examples of natural, stained, and enameled installations of Western pine. 6 pages, two-color folder, No. 309, 3 1/4 x 6 1/8, April, 1942. Western Pine Association, Yeon Bldg., Portland, Ore.

Metal Sampler. "Defense Sampler" wall chart, from American Nick-

eloid Co., Peru, Ill., contains samples of the firm's plated metals, lists their typical uses.

Stock Millwork. Entrance door, corner china cabinets, mantels, other stock millwork items. Catalog N42, 32 pages, May, 1942. Gregg & Son, Nashua, N. H.

Roof Slabs. Precast concrete simulating roof slabs, channel slabs, concrete nailing slabs, acoustical slabs, etc. Included are detail sheets of channel slabs, nailing slabs, interlocking slabs. Catalog 103, 48 pages, A.I.A. File No. 12-E-2. Federal-American Cement Tile Co., 608 S. Dearborn St., Chicago.

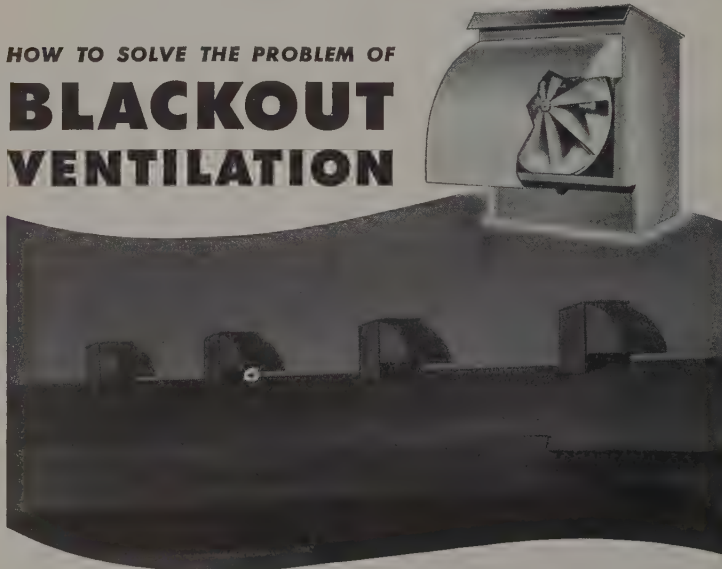
Wall Panels. Prefinished Marlite wall panels and moldings, available in wood-veneers and marble patterns. Twelve pages, in color, including color chips. A.I.A. File No. 23-L-2. Marsh Wall Products, Inc., Dover, Ohio.

Truscon Literature. Effective black out of industrial and other buildings. 8 pages, Catalog No. A-602, March 1942. Truscon Steel Co., Youngstown, Ohio.

Also published—24-page booklet, 6 x 9, with suggestions and tables covering use of welded wire reinforcing in building construction and the manufacture of reinforced concrete pipe. Handbook G-60, March, 1942.

Chamberlain Sketches. Famous English landmarks which have stood for centuries until demolished by Ger-

HOW TO SOLVE THE PROBLEM OF **BLACKOUT VENTILATION**



BLACKED-OUT, closed windows, accentuate the real need for positive, adequate ventilation! From coast to coast, "Blackout" Hoods on Ilg Power Roof Ventilators plus Hooded Fresh Air Inlet Louvers, are now blocking out light from plants, while "worn-out" air, odors, excessive heat, dust or harmful vapors are removed swiftly, quietly, effectively—at low cost—regardless of weather conditions!



NEW BULLETIN 304 — GET YOUR COPY TODAY!

... gives you the complete story on "blackout" ventilation ... shows a typical Ilg engineered installation ... illustrates the design of "Blackout" Hoods (which are quickly, easily fabricated on the job) and positioning of Fresh Air Inlets. **DIMENSION DRAWINGS**—of "Blackout" Hoods and Fresh Air Inlets for the specific job you are engineering will be promptly furnished upon request.

ILG ELECTRIC VENTILATING CO., 2887 N. CRAWFORD AVE., CHICAGO, ILL.
OFFICES IN 41 PRINCIPAL CITIES CONSULT YOUR PHONE DIRECTORY



Vitalized Ventilation

AND AIR CONDITIONING

AIR CHANGE ... NOT JUST AIR MOVEMENT!



man bombs have been reconstructed in pencil by Samuel Chamberlain. A brochure of the series has been printed (devoid of advertising) telling the technique and degrees of pencils used in each case. May, 1942. The brochure, and large-size reproductions suitable for framing, may be had free of charge. Pencil Sales Department, Joseph Dixon Crucible Co., Jersey City, N. J.

Also available: 24-page educational booklet, 5 x 7 1/2". Manufacturing processes involved in making typhonite El-dorado pencils.

(Continued on page 90)

**MORE GUNS
FASTER!**



PHOTO BY U. S. ARMY SIGNAL CORPS

THE **TECO** CONNECTOR SYSTEM OF WOOD CONSTRUCTION

*Releases Steel in
Enormous Quantities for*

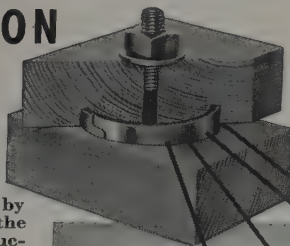
War Needs!

The challenge of a war of productive skills has been met by America with the kind of resourcefulness shown in the adoption of the Teco Connector System of Wood Construction. America is *engineering with wood* on a tremendous scale.

Enormous quantities of steel are being released for the manufacture of armaments by the use of the Teco Connector in wood construction . . . in building lofty and graceful wood towers, big and small factories, bridges, dry docks, hangars, army chapels, pre-fabricated homes and commercial structures of all types. One pound of Teco Connectors releases 11½ to 12 pounds of steel, and 200 of them release enough steel to make approximately 50 heavy machine guns.

The architect, engineer and contractor are provided with a greatly expanded opportunity for service during the war emergency and in the future by the Teco Connector System of Wood Construction. The utilization of 80% to 100% of the strength of wood at joints is made possible by the Teco Connector. It distributes the bearing area over the entire width of the board . . . giving stronger, more rigid joints with less material.

You need working data *now* on the Teco Connector System of Wood Construction. An ordinary carpenter can use Teco Connectors, and any competent engineer can design for their use. Only commonly available sizes of lumber are required.



TECO Timber Connectors Save!

SAVE STEEL . . . One pound of Teco Connectors replaces 11½-12 pounds of steel.

SAVE LUMBER . . . 80% to 100% of the working strength of lumber is utilized instead of from 40% to 60%.

SAVE MONEY . . . Save up to

33½% in cost as compared to steel; up to 45% as compared to traditional wood truss construction.

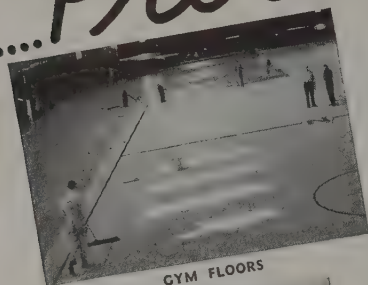
SAVE TIME . . . Trusses can be speedily fabricated on the job out of standard lengths and dimensions of lumber.

Weyerhaeuser Sales Company

MANUFACTURER OF 4-SQUARE LUMBER
FIRST NATIONAL BANK BUILDING • ST. PAUL, MINN.



HILLYARD Floor Treatments.. ...Protect ALL TYPES OF FLOORS



GYM FLOORS



COMPOSITION FLOORS



TERRAZZO FLOORS



WOOD FLOORS



SEE HILLYARD
SPECIFICATIONS
SWEET'S CATALOG
SEC. 17, Page 35

★ In Hillyard laboratories our engineers have developed Floor Treatments and Floor Maintenance products of highest efficiency . . . produced through many years of research and actual working conditions Hillyard methods and materials have proven correct . . . and are now specified by many leading architects and approved by flooring manufacturers and contractors.

Hillyard's Super GYM FINISH is non-slippery, super tough and long wearing, being transparent it brings out the natural beauty and protects and prolongs the life of the gymnasium floor.

★ HIL-BRITE Self Polishing Wax dries bright, eliminates rubbing, buffing and polishing. Saves more than 50% in waxing and maintenance costs.

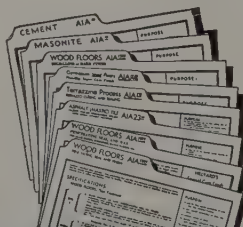
★ TERRAZZINE Process for new Terrazzo retards evaporation so that from ten to fifteen days are added to the curing period of Terrazzo floors. Terrazzine treated floors are thoroughly hardened and are effectively sealed against penetration of moisture, grease and stains.

★ ONEX-SEAL Seals, helps waterproof and protects Terrazzo and Cement Floors. Produces a tough trackless finish . . . sets up extremely hard acting as a constant guard against water, acids, dirt, and traffic.

★ Super SHINE-ALL is the one cleaner for every use, is safe for all type floors, is a neutral chemical cleaner . . . cleans, polishes and preserves, it dissolves dirt and grime quickly and with no injurious results to painted, enameled or varnished surfaces.

SPECIFICATION CARDS

Send for Hillyard's A.I.A. Specification Cards for your files. Hillyard Engineers (in every state) will supervise proper application of our Floor Seals, Finishes, Waxes and other treatments.



(Continued from page 88)

"Techniques." Fourth edition of this educational booklet from Higgins Ink Co., Inc., Brooklyn, N. Y. Included are 38 pages of instructional material. Divided into four sections: Instructional, Techniques for Reproduction, Examples of Scholastic Work, Examples of Professional Work. 50 cents a copy.

Fluorescent Lighting. Development of Zeon cold cathode fluorescent lighting. Installations presented in color. 32 pages, plastic bound, 9 x 12". Federal Electric Co., Inc., 8700 S. State St., Chicago, Ill.

Glass Ideas. Folder of installation details showing practical uses of glass. All necessary information is outlined, and each step is carefully detailed. 16 installation details in a folder. May, 1942. Libby-Owens-Ford Glass Co., Toledo, Ohio.

Also published: 36-page catalog, May, 1942. Illustrated are methods showing how glass can be used in remodeling present homes to provide for additional living space; how old homes can be modernized and converted into rental properties.

Paint Priorities. "Paint Priorities Primer" answers questions regarding priorities and rules governing it. 24 pages, 5 x 7", May, 1942. Devoe & Reynolds Co., Inc., 44th St. and First Ave., New York.

Office Construction. Versatility of Transite movable asbestos walls for speedy construction of offices in industrial plants. 4 pages, folder TR-29A, May, 1942. Johns-Manville, 22 E. 40th St., New York.

School Wardrobes. Use of Modernfold accordion-type doors to create school wardrobes. 4 pages. New Castle Products, New Castle, Ind.

Stove Manual. Construction features, cross-section views, specifications of the new Warm Morning coal heater, a portable unit, are contained in a 16-page booklet, 5 1/2 x 8 1/2". May, 1942. Locke Stove Co., 114 W. 11th St., Kansas City, Mo.

Blackout Ventilators. Six-page Bulletin DS-364, February, 1942, presents roughing-in dimensions, cross section views, description of ventilators designed for blackout plants. The Trane Co., Lacrosse, Wis.

Sash Balances. Catalog 42, A.I.A. File 27-A-1, 32 pages, on unit sash balances for all types of installations. Blue-print type drawings show details.

(Continued on page 92)

HILLYARD SALES CO.

...DISTRIBUTORS HILLYARD CHEMICAL CO. ... ST. JOSEPH, MO. ...

MODERNIZATION WITH MIRRORS

doubles room's size and receipts



The Glass Slipper, Fort Meigs Hotel, Toledo, Ohio

Look closely. You might guess this to be the main bar lounge of a large Manhattan hotel. Actually, this modernized cocktail lounge of Toledo's Fort Meigs Hotel is small in size, seating a total of 65 people at bar and tables.

You are looking at a reflection of the room in its large, polished plate glass mirrored wall. The table tops, too, are of plate glass, indirectly lighted, and specially sandblasted—being shallower near the light source and deepened near the edges. The entire effect of this modernization with mirrors and glass appointments gives this room an illusion of spaciousness double its actual size. But there has been no

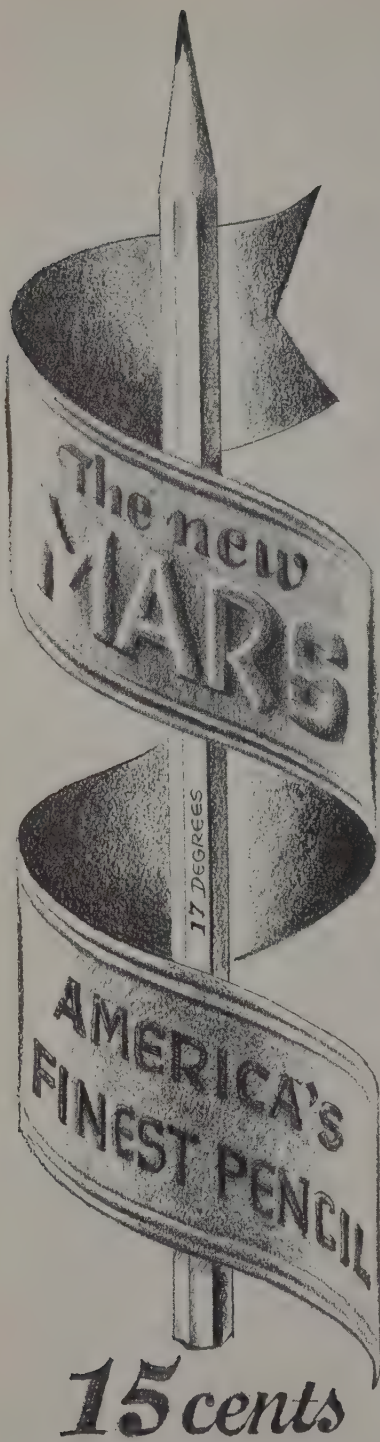
illusion about the increased business . . . more than 150 per cent greater receipts since modernization.

Here is an outstanding example of the modern possibilities in design through use of mirrors. But remember, the first essential of a quality mirror is a quality glass. Your best assurance is to specify Libbey-Owens-Ford Polished Plate Glass. For the extremely smooth, polished finish of L·O·F Plate Glass, its clarity and greater freedom from distortion are essential qualities of a perfect mirror. Libbey-Owens-Ford Glass Company, 1322-A Nicholas Building, Toledo, Ohio.



LIBBEY·OWENS·FORD

QUALITY *Flat Glass* PRODUCTS



J. S. STAEDTLER, INC. NEW YORK

NATIONAL DISTRIBUTORS:
KEUFFEL & ESSER CO.
NEW YORK

(Continued from page 90)

Scuppers. Hooded, windproof scuppers for industrial buildings. Four-page bulletin, A.I.A. File No. 14-P-6, May, 1942. The H. W. Covert Co., 339 E. 48th St., New York.

Flush Valves. 16-page manual on flush valve maintenance. "Trouble-shooter" chart gives condensed data on locating trouble sources. June, 1942. Imperial Brass Mfg. Co., 1200 W. Harrison St., Chicago.

Swimming Pools. Standards for design, equipment, and operation of swimming pools and bathing places. 48 pages, 6 x 9", May, 1942. Wallace & Tiernan Co., Inc., Newark, N. J.

Also published: 4-page folders, 8½" x 11", on the use of chlorine and ammonia-control apparatus in swimming pools in hotels, schools, colleges, public institutions.

MANUFACTURERS' DATA WANTED

M. E. Harris, Jr., Architect, 1496 E. 13th St., South, Salt Lake City, Utah. (Data for complete A.I.A. file; data for building construction.)

Maurice E. Kressly, Architect, Orlando, Florida, has joined the Stone & Webster Engineering Corp., 49 Federal St., Boston, Mass. He is in the Engineering Division, working on war projects, and would like to receive manufacturers' literature.

GOVERNMENT PUBLICATIONS

Luminous Paint. Luminous and fluorescent paints (with bibliographies). Jan. 24, 1942. 9 leaves, 4° (Letter circular LC 678.) (Processed. Replaces LC336.) C 13.16:678. From National Bureau of Standards, Washington, free.

Paints. Classification of house and barn paints as recommended by Department of Agriculture (with list of literature cited); by F. L. Browne. Jan. 1942. (2)+37 p. il. (Agriculture Dept. Technical bulletin 804.) Paper. A 1.36:804. Superintendent of Documents, Washington, 10c.

(Continued on page 94)

WHEN

Time is Short



Above: Social Hall and Auditorium. Architect: Edwin J. Robin, New York City



At Left: School-house. Architect: Adams & Prentice, New York City

• When you're building today—for use tomorrow—there are special advantages in using Cabot's Shingle Stains. They are easy to apply. They cost less than paint. They preserve the wood. And they do not peel or blister even when applied on green lumber or before the building has dried out.

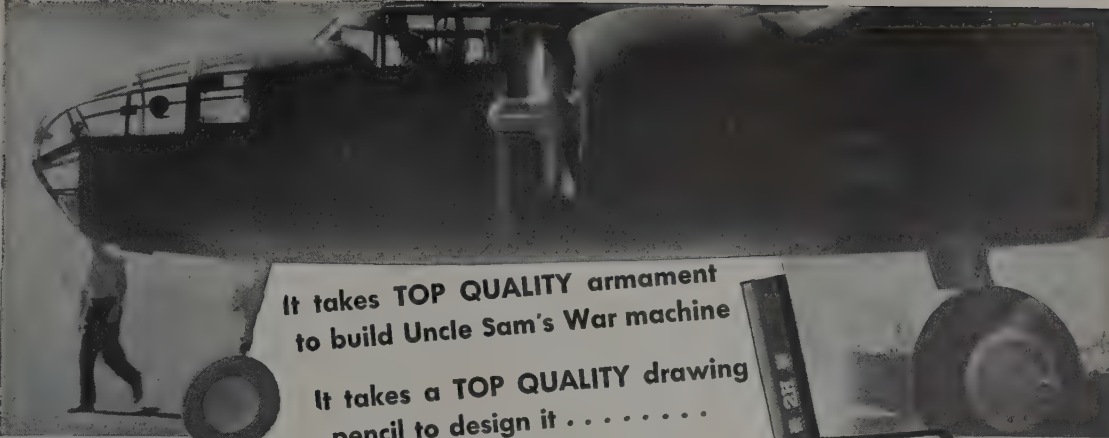
FREE BOOKLET—Stained Houses

Generously illustrated. Contains helpful information about Cabot's Creosote Stains and Cabot's Heavy-Bodied Stains. Write for your copy and color card today. (Or look up Cabot's Stains in Sweet's.) Samuel Cabot, Inc., 1294 Oliver Building, Boston, Mass.

Cabot's Shingle Stains

Creosote

Heavy-Bodied



It takes TOP QUALITY armament
to build Uncle Sam's War machine

It takes a TOP QUALITY drawing
pencil to design it

The choice of pencil craftsmen everywhere

WINNER *Techno-TONE*

DRAWING PENCIL

- ★ Bearing the A. W. Faber name, famous for 181 years
- ★ America's highest-priced drawing pencil
- ★ America's standard of drawing pencil excellence

Besides the 4 Freedoms we are fighting for, there are 4 other freedoms vital to that vast army of pencil men, who conceive and design Uncle Sam's mammoth equipment for all-out War:

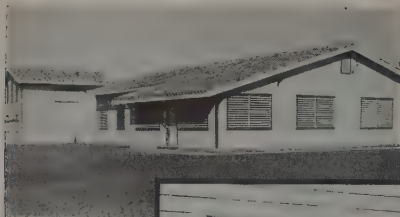
1. Freedom from Scratching
2. Freedom from Smudging
3. Freedom from Flaking
4. Freedom from Gritty Hard Spots

WINNER *Techno-TONE*
guarantees them all!

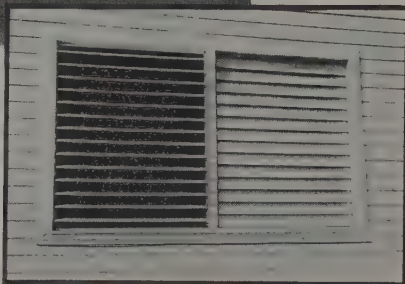
Although* the better part of two centuries is back of the FABER name, we don't ask you to take our word for the excellence of WINNER Techno-TONE. We will gladly send you two FREE samples of any degree you desire. Simply write on your letterhead, stating your position.

Write Dept. PP-7

A.W. FABER *Inc.* NEWARK, N.J.



Jalousie windows, U. S. Government Project, Guantanamo, Cuba.



50,000 JALOUSIE UNITS

Combination SASH, BLINDS, HURRICANE SHUTTERS, BLACKOUT CURTAINS

FURNISHED FOR U. S. MILITARY AND NAVAL BUILDINGS AND RESIDENCES

Used widely throughout the Caribbean area. Specified also by the Foreign Building Office of the State Department, for U. S. Embassy and Minister residences in warm climates.

JALOUSIES are made of strong cedar slats, adjustable to any position for ventilation control, or locked tightly closed to shut out rain, wind and light, by a simple, foolproof mechanism.

They are complete units, consisting of a rigid frame and adjustable slats, and wire mesh insect screen. Quick and easy to ship and install.

See working model at Architects Samples Corporation, 101 Park Avenue, New York City. Complete description in Sweet's Catalog. For literature, shop details and prices, write

101 PARK AVENUE
NEW YORK, N. Y.

PRO-TECT-U AWNING-SHUTTER COMPANY

807 N.W. 20th STREET
MIAMI, FLORIDA

(Continued from page 92)

Glue. Glues for use with wood. Revised December 1941. (1942). 4 pages. (Forest Products Laboratory, Technical note 207.) A 13.27/-9:209. From Forest Products Laboratory, Madison, Wisconsin, free.

Glue. List of publications on glue and plywood; November 1941. (1942.) (1)+1-5a+6-10 p. 4°. A 13.27/7:G 52/941. From Forest Products Laboratory, Madison, Wisconsin, free.

Wood Plastics: as developed at Forest Products Laboratory and their future importance; by E. C. Sherrard, Edward Beglinger, and J. P. Hohf. Revised November 1941 (1942) (1)

+7 p. 3 pl. 4°. A 13.27/2:W 85/-51/941. From Forest Products Laboratory, Madison, Wisconsin, free.

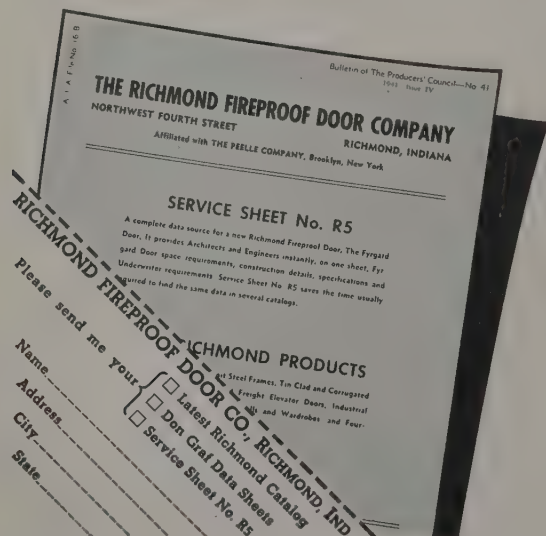
School Buildings. Modern demountable construction for school buildings (with bibliography); by Alice Barrows. (1941). (3)+11+(1) p. 6 pl. 4°. FS 5.4:201. (Circular 201.) (Processed. Illustration on front cover.) FS 5.4:201. From Education Office, Washington, D. C., free.

Construction. Quantity survey guide. (1941.) Cover title, (1) +49 + 13 leaves 4°. (Construction Division) (Processed. The information contained in this guide is for the use of Indian Office personnel in making quantity surveys for construction work.)

I 20.2:C 76. From Indian Affairs Office, Washington, D. C., free.

Camouflage. List of references on camouflage; compiled by Grace Hadley Fuller. March 6, 1942. (1)+16 p. 4°. (Processed. Supplements mimeographed list of November 1940. Title on cover; Camouflage, supplementary list of references.) LC2.2:C 14/940/ supp. From Library of Congress, Bibliography Division, Washington, D. C., free.

Industrial Plants. Security for industrial plants. 1942. v+25 p. Paper. N 1.2: In 27. From Superintendent of Documents, Washington, 10c.



*Write now for this
helpful folder.*

SERVICE SHEET R-5 IS A COMPLETE DATA SOURCE FOR A NEW IMPROVED DESIGN OF FIREPROOF DOOR, THE FYRGARD DOOR.

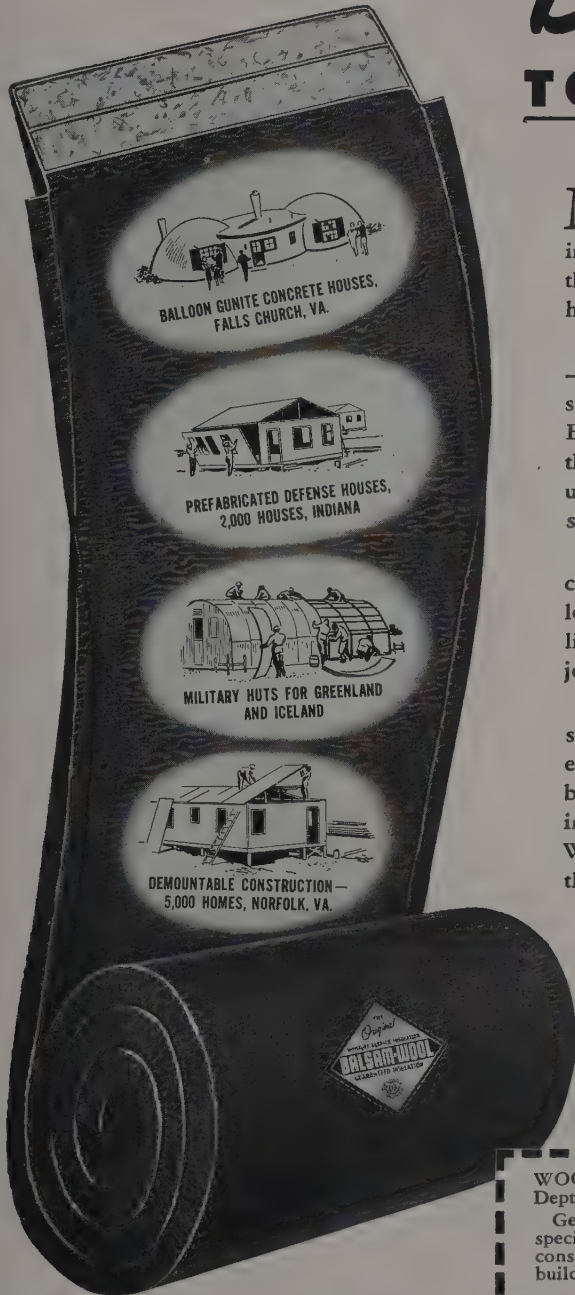
THIS SHEET Gives space requirements, large scale construction details, specifications and Underwriter requirements.

Have you received your set of RICHMOND Don Graf Sheets or our latest catalog?

THE **RICHMOND** FIREPROOF DOOR COMPANY
NORTHWEST FOURTH STREET RICHMOND, INDIANA

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Balsam-Wool TO FIT THEM ALL!



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A STUDY OF THE PARK AND RECREATION PROBLEM OF THE UNITED STATES, published by the National Park Service. (\$1.25, paper cover, illustrated, 279 pages, 9" x 11"—for copies write Superintendent of Documents, United States Government Printing Office, Washington, D. C.)

A few levels of our Government have achieved a mildly efficient degree of coordination but generally there remains a great deal of hit-or-miss relationship, undesirable competition, and duplication of effort. Interrelation of local agencies with those on a higher level leaves a wide area for improvement. And, in order to avoid inane or even harmful development, *a coordination of effort is needed*. Unfortunately, the necessity for this coordination is not obvious nor does there exist a clearing house, even at the Federal level, although coordination of sorts is obtained by an informal exchange.

The considered recommendation of the National Park Service, directed toward a coordinated national plan of recreation that would join the efforts of all governmental units and agencies that have definite contributions to make—has been outlined in this report.

Since man does not live by bread alone, recreation is vitally important, and, after this war, funds for recreation must be efficiently used where the *greatest good to the greatest number* will accrue, because surplus funds for unnecessary, inefficient, or competitive facilities will not exist. The report without saying this much is, nevertheless, an able argument for this form of conservation. **WILLIAM A. STRONG**



The latest of the series of photographic records ("Fair Is Our Land") compiled by **SAMUEL CHAMBERLAIN** continues along the rising curve of excellence one has come to expect from him. Here is a rich collection of graphic records, mostly in photographs, affording proof, if any were needed, of the beauty that lies ready to be seen throughout this American land. Hastings House, New York, \$5.00 a copy

PERIODICALS

ENGLAND

THE ARCHITECTURAL REVIEW

Valid principles for development of "*A Master Plan for London*" are given timely consideration in the June issue of this magazine. Based on research carried out by the Town Planning Committee of the forward-looking *M. A. R.S.* Group, the Master Plan offered for analysis is bold, attempts to reconsider the whole problem of London from the beginning, seeks to eliminate losses in efficiency that plague all cities uncontrolled in their expansion. Another favorable chapter in the literature of town and city planning!

THE ARCHITECT AND BUILDING NEWS

Procedure by which seven housing projects were developed simultaneously under direction of *G. A. Jellicoe*, F.R.I.B.A. makes good reading in the May 29 issue of this magazine. Something for American Architects to ponder is the first paragraph: "The architect was given seven sites simultaneously and was asked to complete the work as quickly as possible. The general contractors for each site were appointed by the Ministry very soon afterwards. The Ministry stated that so far as the architect was concerned, they would deal with one chief architect, but if he in turn cared to sub-let any of his sites that was no concern of theirs." The solution was to standardize the basic designs in London; hand them out to resident architects on the various sites.

AUSTRALIA

SMUDGES

Nearing its third birthday, the stimulating publication of the Architectural Students' Society in Melbourne, Australia, accedes to pressure of the times and returns (March and April issues) to the size and shape of Vol. 1, No. 1. But it has lost none of its tang! In a country under seige the Editor exhibits understandable impatience with the rather pompous programmes continuing in the architectural schools: finding time himself, however, to select the newest Melbourne bank as *Blot of the Month* ("I come to bury Caesar, not to praise him.") and then to commend the only new shop there with "it is the Australian idea of an advertisement in *Harper's Bazaar*, adapted to a cosmetic package, then enlarged to a store front . . . it is rather pleasant to look at these dark days."

UNITED STATES

INTERIORS

As the only surviving American magazine for the professional interior designer, a situation described by Publisher Whitney as "chill eminence," this publication bravely undertakes to present a liberal cross-section of its field. In the June issue, wide variety is achieved happily without confusion; though the subjects range from *Harry S. Pack's* distinctive designs for P.C.A. to a report on imaginative shop interiors for *Gump's* (San Francisco) and *Montaldo's* (Greensboro, North Carolina.) Two of "*Tomorrow's Kitchens*" and more of *Nino's* diverting data studies, "*Anatomy for Decorators*," lend piquancy to the issue.

JOURNAL OF THE AMERICAN SOCIETY OF ARCHITECTURAL HISTORIANS

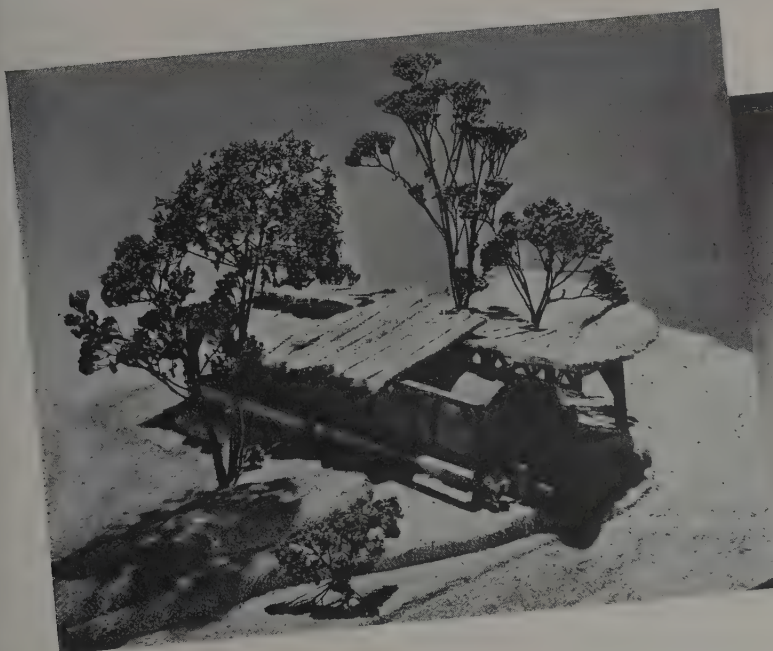
Architects do not need to be told that historic records constitute a rich mine of design and construction information—some of it more applicable to 20th Century problems than the layman would ever credit. Thus the A.S.A.H. Journal is accepted as a valuable document for the architect's library: that it is also "good reading" is tribute to the competence of the Editor, *Turpin C. Bannister*, of the Department of Architecture, Rensselaer Polytechnic Institute, Troy, New York.

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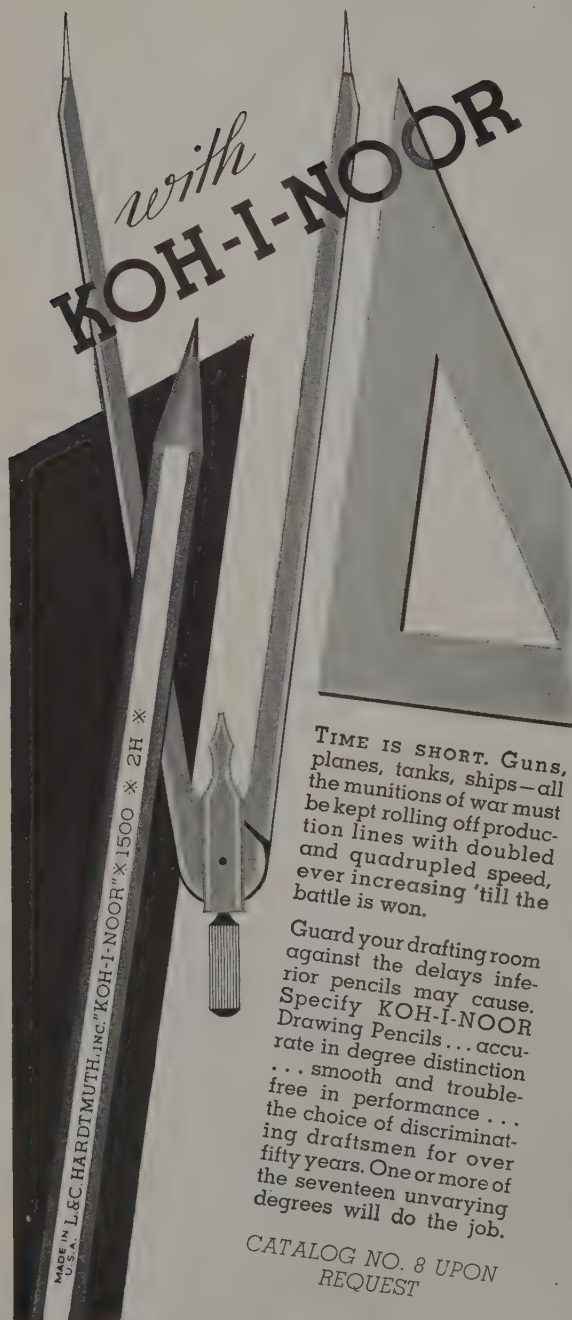
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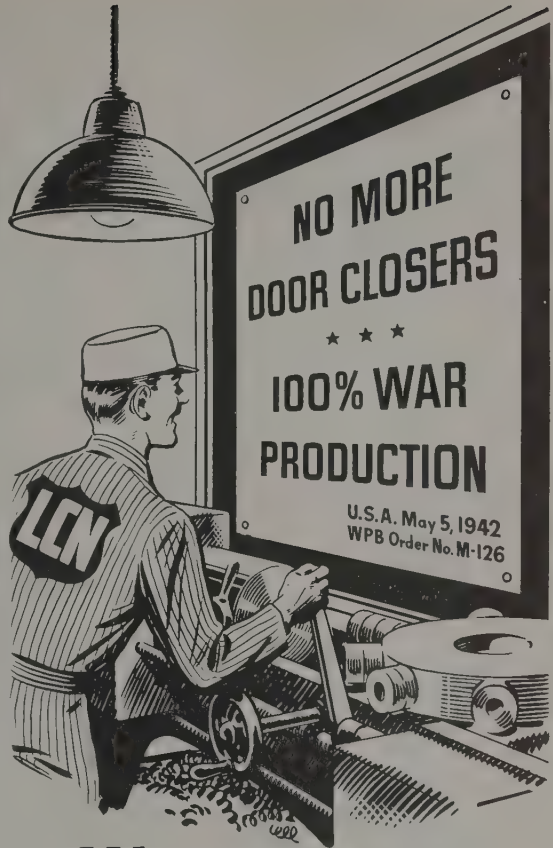
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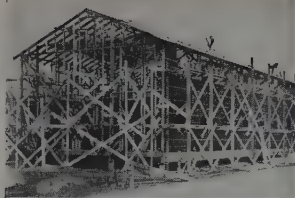
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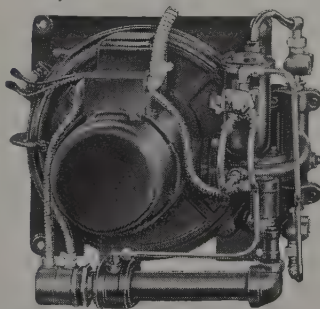
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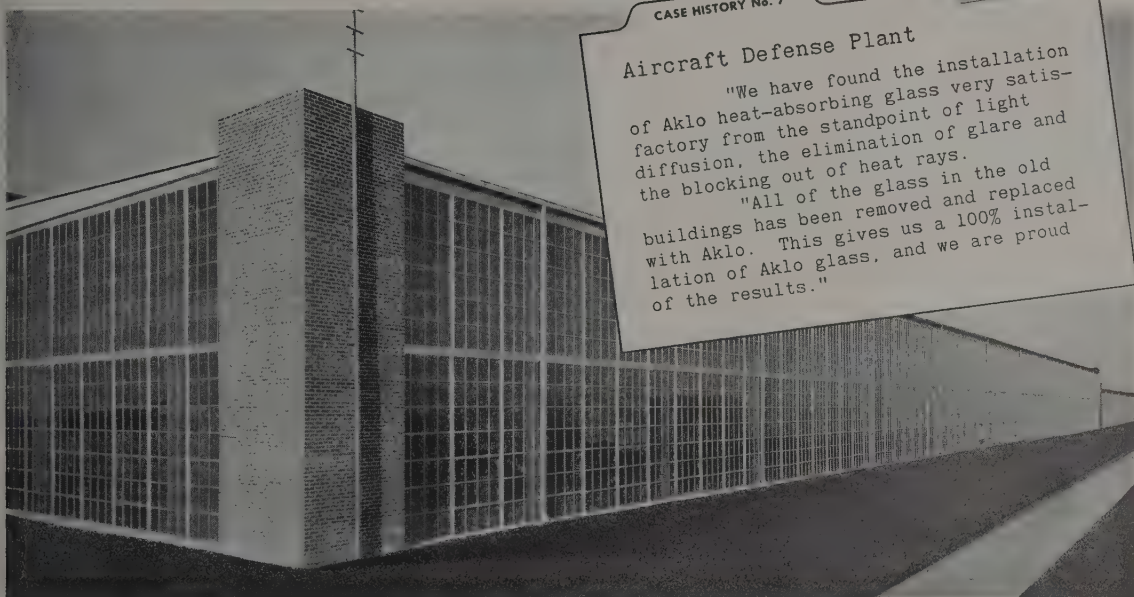
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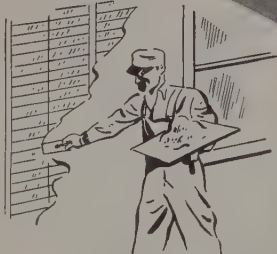
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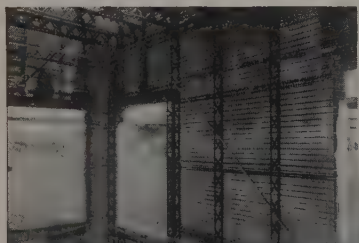


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AHEAD

Robert H. Armstrong, President, American Institute of Real Estate: There will be a postwar jump forward in almost every branch of the building field but no market for properties exceeding \$250,000 valuation until tax rates are lowered.

Robert Sikorsky, 'plane designer, discussing postwar aviation: The helicopter will replace the automobile.

Clavis M. Debard, Vice-president, Stone & Webster Service Corp., on June 24: Any company which ceases to advertise during a war invites the inevitable—serious impairment of prestige and all the other ills arising from a policy of silence.

Hugh Fenwick, Vice-president, Culltee Aircraft Corp., discussing a survey of postwar uses for huge airplane plants: 80% of the replies suggested conversion to something other than plane manufacture.

Frederick P. Champ, President, Mortgage Bankers Ass'n: New housing and expanded commercial aviation will emerge as the two great postwar industries.

James Morris Livingston, U. S. Department of Commerce: In 1945 there will be an effective demand for over 4,000,000 dwelling units, most of them costing \$5,000 or more. "This market for new construction," he explained, "will result partly from the increase in families between 1940 and 1945 and partly from the shift in the effective demand for housing."

New Membership Policy Adopted

**Four-point State Association Resolution
Approved in A.I.A. Meeting**

The hope of many architects, both in and out of the American Institute, to make the A.I.A. representative of a larger segment of the profession, received powerful impetus in the resolution offered by the State Associations and approved by the A.I.A. convention on Thursday evening. On Monday of Convention week, a resolution was drawn by the State Associations, declaring

four points to be urged for adoption as general A.I.A. policy:

First, the resolution favored unification of the architectural profession into one powerful group.

Second, the resolution stated that all reputable architects should be eligible for corporate A.I.A. membership.

Third, a provision was included to allow architects not in a position to assume corporate membership, because of youth or financial or other conditions, to join as associates. A corollary to the third provision made it locally optional that associate membership would be limited to three years, at the expiration of which time corporate membership would become automatic.

A fourth section provided for the revision of the A.I.A. by-laws to take care of the mechanics of the new membership policy.

On Thursday at the final sessions of the Institute this resolution was approved by the delegates, culminating a ten-year battle to achieve unification.

Pun of the Week

After listening attentively to several lengthy sessions of the Convention, LaBeaume observed, "The Architects are making a VOLUBLE contribution to the War effort!"

Play-by-Play Convention Story

TUESDAY MORNING Welcomes Open Convention

President R. H. Shreve presided at the opening session on Tuesday morning. Messages of welcome were extended by Emil Lorch, president of the Detroit Chapter; A. N. Langius, president of the newly-organized Grand Rapids Chapter; the Mayor of Detroit; and by C. W. Palmer, president of the Michigan Society of Architects, following which Senator Elbert D. Thomas, of Utah, Chairman of the Senate Committee on Education and Labor, discussed America's contribution to the political world, and blamed the thoughtless thinking of the fast-receding Twenties for the present conflict.

"The architect's job will be one of intelligent planning," he said. "Planning without intelligence is of no avail, and intelligence without planning is worthless."

TUESDAY AFTERNOON Postwar Planning Discussed

Edmund R. Purves, A.I.A. Washington representative, was chairman at the Tuesday afternoon session, at which time the delegates and speakers discussed the architectural profession today.

"The government has learned to know the architect and what he is," Mr. Purves said. "However, it is incumbent on the profession to demonstrate its right to assume an outstanding position in the affairs of the country."

The Hon. John B. Blandford, Jr., National Housing Agency Administrator, was unable to address the session because he was required to testify before legislative committees in Washington.

"The role of the architect in postwar planning may be comparatively a small part of our whole national participation, but it is a necessary and important part," stated Hon. Alfred F. Beiter, Representative, 41st Congressional District New York. "If architects are to consider effective plans for a postwar period, they must now take into consideration the many conditions which are likely to exist at that time."

"Architects should interest themselves in four potential postwar conditions: Postwar demand for construction, probable availability of construction labor, availability of materials, and the availability of machines, tools, and equipment."

"Those who are not completely engaged in war construction may

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POSTWAR SESSION ADDRESSED BY PROMINENT PERSONAGES

Wednesday Afternoon Meeting Brings Out Many Important Aspects of Postwar Planning

The problems and changes which lie ahead for architects and builders were discussed in a report of the committee on postwar reconstruction, headed by Dean MacCornack, after luncheon of the Wednesday session.

The report said, "Architects and others in the industry, including engineers, regional planners, producers, builders, labor, banking institutions, insurance companies, private investors and all types of owners, and government agencies subsidizing construction, should immediately examine all factors involved with a view to concerted and intelligent action. This group would coordinate sound ideas into a practical program, encouraging the formation of state and regional planning boards, properly financed and equipped."

The committee envisioned regional instead of city planning in which entire metropolitan and surrounding areas will be brought under one jurisdiction, and speculated on the effect of the postwar type of automobile and airplane on the selection of home sites.

Hitchcock Stresses Economic Implications

Dal Hitchcock, Chief of the Postwar Division, Bureau of Labor Statistics, interpreted the program from an economic viewpoint. He discussed the three arenas of activity—free enterprise, monopoly, and public activity.

Reiss and Jellicoe Cite British Experience

Captain Richard Reiss, from the British Ministry of Reconstruction, and G.A. Jellicoe, F.R.I.B.A., representing the British Ministry of Public Works and Planning, both discussed the housing program in England and the work being done by architects in rebuilding England.

Captain Reiss stressed the need in America for horizontal planning, contended that America was ahead of England only in vertical planning. He asked for better planned cities and more harmony in their architecture.

Greer Says Postwar Planning Is Community Problem

Guy E. Greer, Senior Economist of the Federal Reserve System, in discussing the economic phase of postwar planning, suggested that the architects lay the

groundwork by making their fellow citizens aware of the postwar problem since the average citizen does not take too active an interest in the welfare of his community.

[Editor's Note: As an effective method of making the fellow citizens "aware of the postwar problem," newsworthy releases might well have been furnished to the press associations for countrywide publication! With men of national importance appearing before the convention to discuss postwar planning, sufficiently interesting material could have been supplied to the newspapers so that the actual convention discussion might have been widely published.]

"The physical layout and government of the postwar community must provide maximum ease in carrying out the work of the community," said Mr. Greer. "Plenty of elbow room must be provided in the interior of the urban community. Other principles to be taken into consideration included transportation for a fast and pleasant movement of the people, public services for the emotional well-being of the populace, provision of space not only for parking but for small airplane landing fields, a plot of ground for every dwelling unit."

Stewart Sees Need For Rebuilding Cities

"Cities are decaying," said Charles Stewart, of the Urban Land Institute, "and need to be rebuilt. Plan to insure that the building of structures will go hand in hand with principles of city planning that have been tested. Our greatest problem is to close the gap between planning and putting that plan into effect, and to reduce the excessive value of land to a point consistent with the earning power or productivity of the land."

Bigger Visualizes Master Plan for Communities

"The community has a right to plan itself," pointed out Frederick Bigger in discussing the F.H.A. Handbook Plan for postwar reconstruction.

The F.H.A. plan advocates the necessity of plotting a pattern, elimination of substandard areas, strengthening of local planning functions, broadening of condemnation proceedings by investing them in a local land acquisition agency, municipal ownership of blighted areas, participation by

public and private agencies in the planning of the community, and the reconciliation of the financing of public and private housing.

Creviston Indicates Importance Of Trends

Russell G. Creviston, Chairman of the Postwar Reconstruction Committee of the Producers' Council, pointed to the trends to be watched when postwar planning is begun. "War has a tendency of developing self-sufficiency and independence," he said. "We

can not live on the paternalism of the State. The industrialization of women will also have its effect since their thinking will be influenced by their experience on the industrial front."

In order that the Producers' Council might be prepared for its part in the postwar picture, it has appointed a number of committees to study the problem from technical, building finance, industry and consumer relations, distribution, and government relations to industry points of view.

State Associations Hold Meeting

Sixty-two delegates from nineteen State Associations met in Detroit the day before the A.I.A. Convention, under the able chairmanship of State Association Director, Matthew Del Gaudio. Most important business was the drafting of a resolution to make A.I.A. membership inclusive of all eligible and willing members of the profession, for submission to the A.I.A. Convention which approved it on Thursday.

Willis A. Vogel, Vice President of the Architects Society of Ohio and PENCIL POINTS-sponsored Washington representative for the profession, reported at length and in detail on the Washington situation. His activities for the past four months on behalf of architectural men were warmly approved by the meeting.

The question of simplifying interstate registration was made the subject of lively discussion and likewise the matter of establishing more uniform building codes throughout the Nation, especially

in regard to structural requirements and public health and safety. Planning for postwar from both immediate and future points of view were strongly urged. long-range, comprehensive public relations campaign was found to be an essential part of the profession's future program.

Included was a resolution that the Institute be urged to continue under A.I.A. auspices, the Washington activities so far carried on by the Institute "and others. Resolutions covering the recommendations of the State Associations on the foregoing points were carefully framed by Committee to be presented to the A.I.A. Convention for action.

All these recommendations were later acted upon favorably by the A.I.A. meeting.

The State Association meeting were characterized by a down-to-earth, business-like attitude and all items of the agenda were efficiently completed within the allotted time.

A.A.A.E. Meet June 22

The Association for the Advancement of Architectural Education elected the following officers—Wm. Pope Barney, president—Linus B. Smith, vice president, Professor of Architecture, University of Nebraska—Kenneth Johnstone, vice president, Head of School of Architecture, Penn State—Thomas K. Fitz-Patrick, secretary-treasurer, Professor of Architecture, Rice Institute.

W. Pope Barney flew from Houston where he is now head of the ground school at Ellington Field, with the rank of Major in

the Air Corps. After the meeting he flew back to Texas.

In a paper read by President Barney he said, "We submit that the type of engineering which is necessary to architecture is architectural engineering and is not properly limited to merely structural considerations." Mr. Barney further stated that any system of architectural education which does not make the fullest acknowledgment of the new influence which comes from structure and materials is refusing to see the handwriting on the wall.

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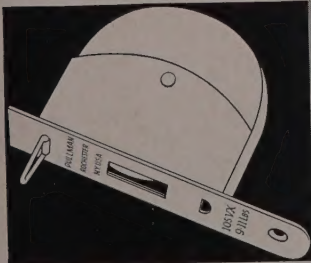
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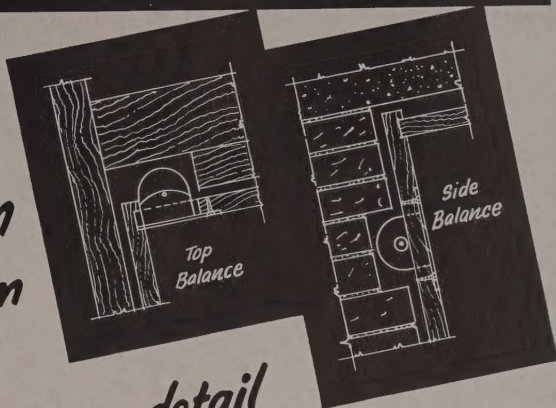
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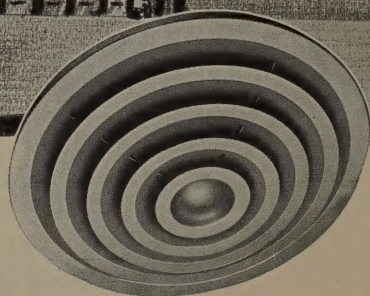
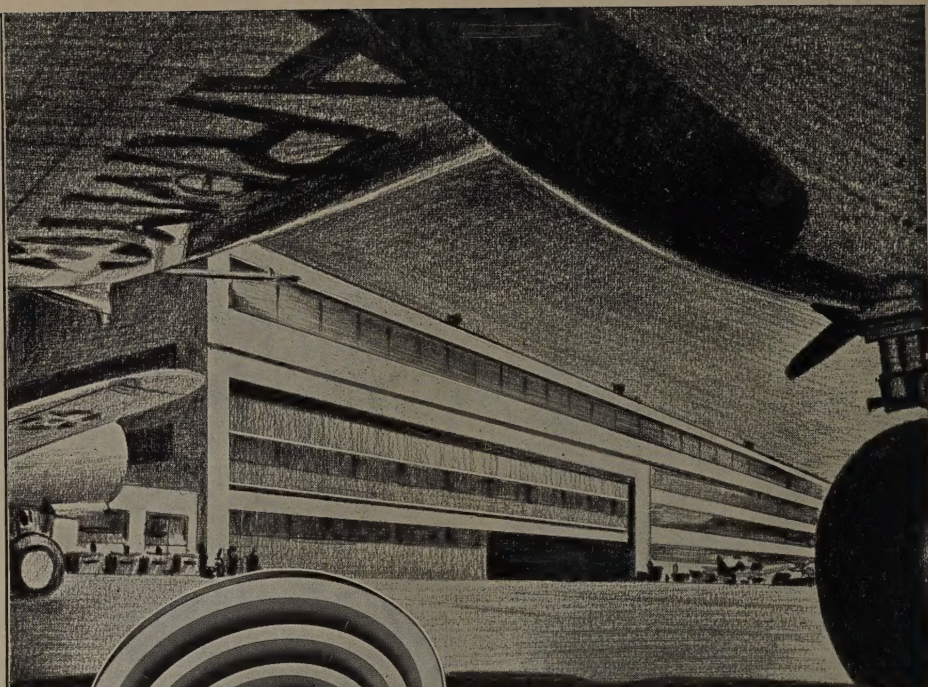
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